

# Test & Measurement



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## Test & Measurement

### Test Equipment

### Thermal Imaging

#### Benefits of Thermography



Infrared radiation (IR) is emitted by every object above a temperature of -273°C. The human eye cannot detect infrared radiation, but an infrared camera can. It can take pictures of objects to show the amount of heat they are emitting. Such pictures consist of a map of colours that show surface temperatures of the object. An infrared camera is an invaluable diagnostic tool in a variety of industries, as it can detect abnormally hot or cold areas or components. Thermography is a powerful maintenance tool, as in many instances equipment failure is preceded by a period of increasing heat. An infrared camera is also an excellent building inspection instrument, it quickly scans and identifies problem areas that can't be seen by the naked eye.

It is also used for repair verification and insurance purposes. They allow you to accurately measure the temperature and take an image of any object you are looking at in a non-contact mode, without putting you or staff in danger.

FLIR Systems are the global leader in infrared camera technology and their latest models - E4, E6 and E8 - offer temperature measurement together with an MSX-enhanced IR image and a visual image. They are light-weight, compact and rugged. The new user-friendly interface makes it easy to start using the camera without previous knowledge or camera training

The ideal tool for condition monitoring to assist in locating problems fast, indoor or outdoor instantly identify previously 'invisible' potential problems in mechanical, electrical and many building applications.

#### Applications

Electric Motors  
Bearings (Plummer Blocks and Self Lube)  
Gearboxes  
Idler bearings on conveyors  
Conveyor belts  
Pulleys  
Pumps and piping  
Steam traps  
Oil coolers  
Tank liquid levels  
Insulation integrity  
Refractory integrity  
Circuit breakers  
Busbars  
Switchgear  
Fuses  
Relay panels

#### Flir iX Series Thermal Imaging Camera's



FLIR i3 / i5 / i7 is the smallest, lightest and most affordable thermal imaging camera on the market. It is incredibly easy to use and requires no former experience. It really is a matter of "point-shoot-detect" to obtain high-quality thermal images that will immediately give you the thermal information you need.

- Outstanding ease-of-use  
The camera is extremely easy to understand and operate, designed for entry-level users. The camera is intuitive and comes with a full manual.

- Fully automatic  
Produces instant, point-and-shoot JPEG thermal imagery that carries all required temperature data and can be stored internally or externally, sent and analyzed.

- Focus free  
The fixed focus free lens makes using the FLIR i5/i7 a snap
- Compact and lightweight  
FLIR i3/i5/i7 weighs only 365 g, and is easy to store in a belt pouch.

Extremely rugged

- FLIR i-Series thermal imaging cameras withstand a 2 meter drop. They are watersplash proof and IP43 rated.

- SD card storage  
Stores images with unique ID in radiometric JPEG format, containing all temperature data on a standard miniSD card. USB file transfer to PC.

- Reporting and analysis software included  
FLIR Tools software is included and the camera is also compatible with the more powerful FLIR Reporter.

- Outstanding measurement/accuracy  
High accuracy of  $\pm 2^\circ\text{C}$  or  $\pm 2\%$  produces sensitive thermal images for general purpose maintenance analysis. Measures temperatures up to  $+250^\circ\text{C}$  and detects temperature differences as small as  $0.10^\circ\text{C}$

- Measurement functions  
Spotmeter, box with max./min. temperatures, isotherm above/below (depending on model).

FLIR i3	FLIR i5	FLIR i7
Thermal image quality: 60x60 pixels	Thermal image quality: 100x100 pixels	Thermal image quality: 140x140 pixels
Field of View: 12.5°(H) x 12.5°(V)	Field of View: 21°(H) x 21°(V)	Field of View: 29°(H) x 29°(V)
Center spot	Center spot	Spotmeter, area with max./min. temperature, isotherm above/below
Thermal sensitivity: 0.15°C	Thermal sensitivity: 0.10°C	Thermal sensitivity: 0.10°C

#### Price Each

Order Code	Product Code	Description	1+
WX54172 ‡	60101-0101	i3 Thermal Camera	£895.00
WX43937 ‡	60101-0201	i5 Thermal Camera	£1,236.00
WX54173 ‡	60101-0301	i7 Thermal Camera	£1,676.00
WX60837 ‡	T911085	Carry Pouch	£30.00
WX60838 ‡	T911025	Car Charger	£34.00
WX60839 ‡	T911093	Tool Belt	£30.00
WX60840 ‡	T910737	SD card	£17.00

#### Flir Ex Series Thermal Imaging/ Temperature Camera's



- The new Ex series offers temperature measurement together with an MSX-enhanced IR image and a visual image
- It is light-weight, compact and rugged
- The new user-friendly interface makes it easy to start using the camera without previous knowledge or camera training
- MSX, for easier interpretation of the image
- Visual and IR camera
- New user-friendly interface
- FOV 45°, well-suited for building and electrical/mechanical application

- Infrared camera supplied with:  
Hard transport case  
Battery (inside camera)  
USB cable  
Power supply/charger with EU, UK, US and Australian plugs  
Printed Getting Started Guide  
Printed Important Information Guide  
User documentation CD-ROM  
Warranty extension card  
Thank you card  
Calibration certificate

#### Price Each

Order Code	Product Code	Description	1+
WX60841 ‡	63901-0101	E4 Thermal Camera	POA
WX60842 ‡	63902-0202	E6 Thermal Camera	POA
WX60843 ‡	63903-0303	E8 Thermal Camera	POA
WX60844 ‡	T127826	Carry Pouch	POA
WX60845 ‡	T198532	Car Charger	POA
WX60846 ‡	T198404	Spare battery	POA
WX60847 ‡	T198531	2 Bay charger	POA

‡ Special delivery applies. Please ask for details

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web or via your  
local Brammer  
Sales and Service  
Centre**

## Flir Ex0 Series Thermal Imaging Camera's



With an image quality of 320x280 pixels, the FLIR Exx series is ideal for Electrical/Mechanical inspections/maintenance to find faults and ensure equipment operates at maximum efficiency and safety. Also for Building inspections to find energy loss, moisture ingress and pipe leaks, and construction faults.

- 160x120 (E30 & E40), 240x180 (E50), 320x240 (E60) pixel resolution
- Sensitive (detects 0.1degC (E30), 0.05 to 0.07degC (E40), 0.045 to 0.05degC (E50 & E60) temp differences).
- 25x19 ° FOV.
- Interchangeable lenses (Optional wide angle or telephoto).
- Manual Focus.
- WiFi output to mobile devices via free APP (to iPad/phone/Android/laptop) - (not on E30)
- Bluetooth link to Clamp or Moisture Meter & Voice Headset - (not on E30)
- Thermal + Visual cameras (High quality in-built visual camera).
- Blend visual and thermal images (thermal/visual/picture-in-picture/ thermal fusion) - (not on E30)
- Jpeg images onto SD card.
- Video recording - (not on E30)
- Video output (composite)
- Radiometric video streaming via USB cable to PC – live analysis/ image capture/video recording.
- Large tough Touchscreen.
- Laser Pointer.
- Tripod mountable.
- Measurement functions (spot/box/isotherm temperature).
- High accuracy (+/- 2%).
- Text and Voice annotations. Building isotherm alarms on bx versions (dew point and insulation alarms).
- Compact and Lightweight (only 825g).
- Extremely rugged (2m drop tested and IP54 rated).
- Long battery life (4hrs).
- Free FLIR Tools software or optional upgrade to FLIR Tools+
- Supplied with: Hard transport case

- Infrared camera with lens
- Battery
- Calibration certificate
- Camera lens cap
- Downloads brochure
- FLIR Tools software
- Handstrap
- Memory card
- Power supply, incl. multi-plugs
- Printed Getting Started Guide
- Printed Important Information Guide

Service & training brochure

USB cable

User documentation CD-ROM

Video cable

Warranty extension card

- Range of Accessories listed below (Other accessories and Lenses available on request)

Price Each

Order Code	Product Code	Description	1+
<b>WX54169 ‡</b>	49001-1801	E30 Thermal Camera	£2,396.00
<b>WX60848 ‡</b>	49001-1901	E30bx Thermal Camera	£2,396.00
<b>WX54170 ‡</b>	49001-2001	E40 Camera Inc WiFi	£3,196.00
<b>WX60849 ‡</b>	49001-2401	E40bx Camera Inc WiFi	£3,196.00
<b>WX54171 ‡</b>	49001-2101	E50 Camera Inc WiFi	£4,396.00
<b>WX60850 ‡</b>	49001-2501	E50bx Camera Inc WiFi	£4,396.00
<b>WX54168 ‡</b>	49001-0602	E60 Camera Inc WiFi	£5,996.00
<b>WX60851 ‡</b>	49001-1002	E60bx Camera Inc WiFi	£5,996.00
<b>WX60852 ‡</b>	T911087	Carry Pouch	£34.00
<b>WX60853 ‡</b>	T911093	Car Charger	£34.00
<b>WX60839 ‡</b>	T911093	Tool Belt	£30.00
<b>WX60840 ‡</b>	T910737	SD card	£17.00
<b>WX60854 ‡</b>	T197752	Spare battery	£71.00

FLIR E30/E30bx	FLIR E40/E40bx	FLIR E50/E50bx	FLIR E60/E60bx
Thermal image quality: 160x120 pixels	Thermal image quality: 160x120 pixels	Thermal image quality: 240x180 pixels	Thermal image quality: 320x240 pixels
Thermal sensitivity: <0.1°C	Thermal sensitivity: <0.07°C (0.045°C E40bx)	Thermal sensitivity: <0.05°C (0.045°C E50bx)	Thermal sensitivity: <0.05°C (0.045°C E60bx)
Temperature range: -20°C to +350°C	Temperature range: -20°C to +650°C	Temperature range: -20°C to +650°C	Temperature range: -20°C to +650°C
Spotmeter: 1	Spotmeter: 3	Spotmeter: 3	Spotmeter: 3
1 box with min./max./average	3 boxes with min./max./average	3 boxes with min./max./average	3 boxes with min./max./average
Built-in 2 Mpxels camera	Built-in 3.1 Mpxels camera	Built-in 3.1 Mpxels camera	Built-in 3.1 Mpxels camera
	Delta temperature measurement	Delta temperature measurement	Delta temperature measurement
	Voice / text annotations	Voice / text annotations	Voice / text annotations
	MeterLink™	MeterLink™	MeterLink™
	Bluetooth® / WiFi	Bluetooth® / WiFi	Bluetooth® / WiFi
	1-2x continuous digital zoom	1-4x continuous digital zoom	1-4x continuous digital zoom
	PIP IR area on visual image	PIP Scalable IR area on visual image	PIP Scalable IR area on visual image
	Non-radiometric IR-video recording	Non-radiometric IR-video recording	Non-radiometric IR-video recording
	Radiometric IR-video recording	Radiometric IR-video recording	Radiometric IR-video recording
	Non-radiometric IR-video streaming	Non-radiometric IR-video streaming	Non-radiometric IR-video streaming
		Thermal Fusion	Thermal Fusion
			Instant report

‡ Special delivery applies. Please ask for details

## Flir T4xx Series Thermal Imaging Camera's



With an image quality of 320x240 pixels, the FLIR T4xx series is ideal for Electrical/Mechanical inspections/maintenance to find faults and ensure equipment operates at maximum efficiency and safety. Also for Building inspections to find energy loss, moisture ingress and pipe leaks, and construction faults.

- 320x240 pixel resolution
- Sensitive (detects 0.045degC temp differences).
- 25x19 ° FOV.
- Wide Temperature range (-20 to +650°C (T420 and T440bx) or -20 to +1200°C (T440))
- Interchangeable lenses (Optional wide angle, extra wide angle, telephoto or close-up macro).
- Autofocus & Manual Focus.
- Rotatable screen for easy imaging.
- WiFi output to mobile devices via free APP (to iPad/phone/Android/laptop).
- Bluetooth link to Clamp or Moisture Meter & Voice Headset.
- Thermal + Visual cameras (High quality in-built visual camera).
- Blend visual and thermal images (thermal/visual/picture-in-picture/ thermal fusion).
- Additional image blending - MSX
- Building alarms (Moisture and Insulation failure isotherms) (...bx versions)
- Jpeg images onto SD card.
- Video recording.
- Video output (composite)
- Radiometric video streaming via USB cable to PC – live analysis/ image capture/video recording.
- Periodic programmable image capture
- Large tough Touchscreen.
- Laser Pointer.
- Tripod mountable.
- 4x Zoom (T420), 8x zoom (T440 & T440bx).
- Measurement functions (spot/box/isotherm temperature).
- Additional measurement functions (Compass/Audible isotherm alarm)
- Image sketch on thermal/visual (T440 & T440bx only)
- High accuracy (+/- 2%).
- Text and Voice annotations
- Compact and Lightweight (only 825g).
- Rugged (drop tested and IP54 rated).
- Long battery life (4hrs).
- Free FLIR Tools software or optional upgrade to FLIR Tools+.
- Supplied as: Infrared camera with lens
- Battery (2 ea.)
- Battery charger
- Bluetooth headset
- Calibration certificate
- Camera lens cap
- Downloads brochure
- FLIR Tools download card
- FLIR Apps card
- Getting Started Guide
- Hard transport case
- Important Information Guide
- Memory card
- Neckstrap
- Optics brochure
- Power supply, incl. multi-plugs
- Service & training brochure
- Sunshield
- Thank you card
- USB cable
- User documentation CD-ROM
- Video cable
- Warranty extension card
- Range of Accessories listed below (Other accessories and Lenses available on request)

Price Each

Order Code	Product Code	Description	1+
<b>WX60855 ‡</b>	62101-0101	T420 Thermal Camera	£7,160.00
<b>WX60856 ‡</b>	62101-0501	T420bx Thermal Camera	£7,160.00
<b>WX60857 ‡</b>	62101-0301	T440 Thermal Camera	£8,760.00
<b>WX60858 ‡</b>	62101-0701	T440bx Thermal Camera	£8,760.00
<b>WX60852 ‡</b>	T911087	Carry Pouch	£34.00
<b>WX60853 ‡</b>	T196497	Car Charger	£34.00
<b>WX60839 ‡</b>	T911093	Tool Belt	£30.00
<b>WX60840 ‡</b>	T910737	SD card	£17.00
<b>WX60854 ‡</b>	T197752	Spare battery	£71.00

‡ Special delivery applies. Please ask for details



## Flir T6xx Series Thermal Imaging Camera's



With an image quality of 640x480 pixels, the FLIR T6xx series is ideal for Electrical/Mechanical inspections/maintenance to find faults and ensure equipment operates at maximum efficiency and safety. Also for Building inspections to find energy loss, moisture ingress and pipe leaks, and construction faults.

- 640x480 pixel resolution
- Sensitive (detects 0.04degC (T620) or 0.035degC (T640) temp differences).
- 25x19 ° FOV, 15x11 ° FOV or 45x34 ° FOV (choose when ordering).
- Wide Temperature range (-40 to +650° C) (optional upgrade to 2000°C) or -40 to 2000degC (T640)
- Interchangeable lenses (Optional wide angle, extra wide angle, telephoto or close-up macro).
- Viewfinder (T640/T640bx only)
- Continuous Autofocus (T640/T640bx), Autofocus & Manual Focus (all T6xx).
- Rotatable screen for easy imaging.
- WiFi output to mobile devices via free APP (to iPad/phone/Android/laptop).
- Bluetooth link to Clamp or Moisture Meter & Voice Headset.
- Thermal + Visual cameras (High quality in-built visual camera).
- Blend visual and thermal images (thermal/visual/picture-in-picture/ thermal fusion).
- Additional image blending - MSX
- Building alarms (Moisture and Insulation failure isotherms) (... bx versions)
- Jpeg images onto SD card.
- Video recording.
- Video output (composite)
- Radiometric video streaming via USB cable to PC – live analysis/ image capture/video recording.
- Periodic programmable image capture
- GPS
- Large tough Touchscreen.
- Laser Pointer.
- Tripod mountable.
- 8x zoom.
- Measurement functions (spot/box/circle or isotherm temperatures).
- Additional measurement functions (Compass/Audible isotherm alarm) (Compass on bx versions)
- Image sketch on thermal/visual (T640/T640bx)
- High accuracy (+/- 2%).
- Text and Voice annotations
- Compact and Lightweight (only 1.3g).
- Rugged (drop tested and IP54 rated).
- 2.5-3hrs battery life.
- Free FLIR Tools software or optional upgrade to FLIR Tools+.
- Supplied with: Infrared camera with lens  
Battery (2 ea.)  
Battery charger  
Bluetooth headset  
Calibration certificate  
Downloads brochure  
FLIR Tools download card  
FLIR apps card  
Getting Started Guide  
HDMI-DVI cable  
HDMI-HDMI cable  
Hard transport case  
Important Information Guide  
Large eyecap  
Lens cap  
Memory card with adapter  
Neck strap  
Optics brochure  
Power supply, incl. multi-plugs  
Service & training brochure  
Thank you card  
Tripod adapter  
USB cable, Std A to Mini-B  
User documentation CD-ROM  
Warranty extension card
- Range of Accessories listed below (Other accessories and Lenses available on request)

Price Each

Order Code	Product Code	Description	1+
WX60859	‡ 55901-2302	T620 25° - Thermal Camera	£15,960.00
WX60860	‡ 55901-2301	T620 15° - Thermal Camera	£16,520.00
WX60861	‡ 55901-2303	T620 45° - Thermal Camera	£15,960.00
WX60862	‡ 55901-4302	T620bx 25° - Thermal Camera	£15,960.00
WX60863	‡ 55901-4301	T620bx 15° - Thermal Camera	£16,520.00
WX60864	‡ 55901-4303	T620bx 45° - Thermal Camera	£15,960.00
WX60865	‡ 55902-2502	T640 25° - Thermal Camera	£20,760.00
WX60866	‡ 55902-2501	T640 15° - Thermal Camera	£21,320.00
WX60867	‡ 55902-2503	T640 45° - Thermal Camera	£20,760.00
WX60868	‡ 55902-4502	T640bx 25° - Thermal Camera	£20,760.00
WX60869	‡ 55902-4501	T640bx 15° - Thermal Camera	£21,320.00
WX60870	‡ 55902-4503	T640bx 45° - Thermal Camera	£20,760.00
WX60871	‡ T911048	Carry Pouch	£38.00
WX60872	‡ T9110490	Car Charger	£34.00
WX60839	‡ T911093	Tool Belt	£30.00
WX60840	‡ T910737	SD card	£17.00
WX60873	‡ T198055	Spare battery	£105.00

‡ Special delivery applies. Please ask for details

## Flir P Series Thermal Imaging Camera's



With an image quality of 640x480 pixels, the FLIRP/P660 series is ideal for Electrical/Mechanical inspections/maintenance to find faults and ensure equipment operates at maximum efficiency and safety. Also for Building inspections to find energy loss, moisture ingress and pipe leaks, and construction faults.

- 640x480 pixel resolution
- Sensitive (detects 0.03degC temp differences).
- 25x18 °, 45x34 ° or 12x9 ° FOV (choose when ordering).
- Panorama capable
- Wide Temperature range (-40 to +500° C) (optional upgrade to 2000°C)
- Interchangeable lenses (Optional wide angle, extra wide angle, telephoto or close-up macro).
- Viewfinder (rotatable for easy imaging)
- Autofocus & Manual Focus.
- Rotatable screen for easy imaging.
- WiFi output to mobile devices via free APP (to iPad/phone/Android/laptop).
- Bluetooth link to Clamp or Moisture Meter & Voice Headset.
- Thermal + Visual cameras (High quality in-built visual camera).
- Blend visual and thermal images (thermal/visual/picture-in-picture/ thermal fusion).
- DDE (Dynamic Details Enhancement for Mil-spec image detail)
- Building alarms (Moisture and Insulation failure isotherms) (B660)
- Jpeg images onto SD card.
- Video recording.
- Video output (composite)
- Radiometric video streaming via USB cable to PC – live analysis/ image capture/video recording.
- Periodic programmable image capture
- Radiometric sequence burst recording to RAM.
- GPS
- Large 5.4" Tough Screen.
- Laser Pointer.
- Tripod mountable.
- 8x zoom.
- Measurement functions (spot/box/circle or isotherm temperatures).
- Additional measurement functions (Live line profile/Audible isotherm alarm)
- High accuracy (+/-1%).
- Text and Voice annotations
- Compact and Lightweight (only 1.8g).
- Rugged (drop tested and IP54 rated).
- 3hrs battery life.
- Free FLIR Tools software or optional upgrade to FLIR Tools+.

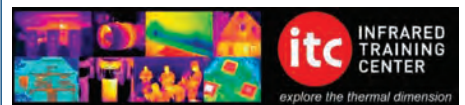
- Supplied with:  
Hard transport case  
Infrared camera with lens  
Battery (2 ea.)  
Battery charger  
Bluetooth headset  
Bluetooth® USB micro adapter  
Calibration certificate  
Downloads brochure  
FLIR Tools software  
FireWire cable, 4/6  
FireWire cable, 6/6  
Lens cap (mounted on lens)  
Lens cap (2 ea.)  
Memory card-to-USB adapter  
Memory card with adapter  
Power supply, incl. multi-plugs  
Printed Getting Started Guide  
Printed Important Information Guide  
Service & training brochure  
Shoulder strap  
USB cable  
User documentation CD-ROM  
Video cable  
Warranty extension card  
Wi-Fi USB micro adapter (depending on CE and FCC regulations regarding wireless equipment for your country)
- Range of Accessories listed below (Other accessories and Lenses available on request)

Price Each

Order Code	Product Code	Description	1+
WX60874	‡ 40402-3002	P660 25° - Thermal Camera	£25,560.00
WX60875	‡ 40402-3802	B660 25° - Thermal Camera	£25,560.00
WX60872	‡ T9110490	Car Charger	£34.00
WX60840	‡ T910737	SD card	£17.00
WX60876	‡ T1196209	Spare battery	£101.00

‡ Special delivery applies. Please ask for details

## Thermal Imaging Training Courses



Range of Thermal Imaging "thermography" courses

			Price Per Person
Order Code	Product Code	Description	1+
WX60877	‡ ITC-EXP-1011	Short course Introduction to thermography	£276.00
WX60878	‡ ITC-EXP-2041	Short course electrical thermography	£500.00
WX60879	‡ ITC-PRA-2011	ITC Practical Course – Solar Panel Inspection	£500.00
WX60880	‡ ITC-EXP-2061	ITC Short course HVAC and Plumbing	£500.00
WX60881	‡ ITC-CER-5101	Certification: ITC Cert. Course L1	£1,600.00
WX60882	‡ ITC-CER-5201	Certification: ITC Cert. Course L2	£1,680.00

‡ Special delivery applies. Please ask for details



## Fluke Ti100 Thermal Imager



FLUKE

- The Ti100 is the perfect general-purpose thermal imager designed specifically for the cost-conscious professional. It delivers incredible imaging at a great value and is the only ultra-rugged, one-handed professional thermal imager in its price class
- Temperature measurement range: -20 °C to +250 °C (-4 °F to +482 °F) Thermal sensitivity: ≤ 0.10 °C at 30 °C target temp (100 mK)
- **Focus-free infrared**  
The Ti100 offers the highest performing one-handed, focus-free infrared system available. From four feet (1.2 M) and beyond you'll always be in good focus no matter what you're inspecting
- **Laser pointer**  
A laser pointer allows you to accurately point to an area of concern to a colleague or customer
- **Built rugged**  
The new Fluke imagers are the most rugged and reliable, lightweight professional point-and-shoot thermal imagers on the market. They've been put through a battery of tests, including two-meter drops, vibration, extreme temperature and humidity, and electromagnetic/radio frequency interference testing to ensure they survive in your environment
- **One-hand operation**  
The Ti100 has been designed for simple, one-handed operation. Its lightweight, slim profile makes it easy to operate in either landscape or portrait format – your choice. All so you'll have one hand free to steady yourself or hold another tool

Technical Specification	
Infrared resolution	160 x 120
Focus mechanism	Focus-free: ~48" and beyond
Thermal sensitivity (NETD)	≤ 0.10 °C at 30 °C target temp (100 mK)
Temperature measurement range (not calibrated below -10 °C)	-20 °C to +250 °C (-4 °F to +482 °F)
Temperature measurement accuracy	± 2 °C or 2 % (at 25 °C nominal, whichever is greater)
Laser pointer/torch?	Laser pointer only
Rechargeable batteries (4+ hours each)	1 rugged lithium-ion smart battery
Ruggedness and reliability	2-meter drop test, IP54 and integrated lens cap
Weight	0.726 kg (1.63 lbs.)
Warranty	2 years, with additional available

## Price Each

Order Code	Product Code	Description	1+
WX54175 ‡	Ti100	Ti100 Thermal Imager	£1,650.00

‡ Special delivery applies. Please ask for details

## Fluke Ti105 Thermal Imager



FLUKE

NEW

- Industrial and commercial maintenance made easy
- Technology isn't working for you if it's slowing you down. The Fluke Ti100 Series thermal imagers specifically designed to help you do more in less time, while being at home in the harshest of environments. Light, rugged, easiest-to-use professional imagers
- IR-Fusion® technology
- Enjoy the industry's best point-and-shoot IR-Fusion camera. Fluke patented technology blends digital and infrared images into a single image to precisely document problem areas.
- Rugged one-hand operation
- Experience the most rugged and reliable, lightweight professional camera around.
- One-touch focus, laser pointer, and torch. Point-and-shoot simplicity.
- No one builds more rugged, ergonomic tools than Fluke.

## Technical Specification

Ti105	
Infrared resolution	160 x 120
Focus mechanism	Focus-free: 1.2m and beyond
Temperature measurement range	-20°C to +250°C
IR-Fusion® technology	Full infrared, PIP, Full visible
Laser pointer/torch	Laser Pointer and torch
Rechargeable batteries ( 4+ hours each )	1 rugged lithium-ion smart battery
Ruggedness and reliability	2-meter drop test, IP54 and integrated lens cap
Weight	0.726 kg ( 1.63 lbs )
Warranty	2 years, with additional available

## Price Each

Order Code	Product Code	Description	1+
WX60883 ‡	Ti105	Thermal Imager	£2,366.00

‡ Special delivery applies. Please ask for details

## Fluke Ti110 Thermal Imager



FLUKE

NEW

- Industrial and commercial maintenance made easy
- Technology isn't working for you if it's slowing you down. The Fluke Ti100 Series thermal imagers specifically designed to help you do more in less time, while being at home in the harshest of environments. Light, rugged, easiest-to-use professional imagers.
- IR-OptiFlex™ focus system
- Discover issues significantly faster with Fluke's revolutionary, ultra-rugged focus system.
- The IR-OptiFlex focus system gives you optimum focus by combining focus-free ease-of-use with the flexibility of manual focus on the same camera!
- IR-Fusion® technology
- Enjoy the industry's best point-and-shoot IR-Fusion camera. Fluke patented technology blends digital and infrared images into a single image to precisely document problem areas
- Rugged one-hand operation
- Experience the most rugged and reliable, lightweight professional camera around.
- One-touch focus, laser pointer, and torch. Point-and-shoot simplicity.
- No one builds more rugged, ergonomic tools than Fluke.

## Technical Specification

Ti110	
Infrared resolution	160 x 120
Focus mechanism	IR-Optiflex focus
Temperature measurement range	-20°C to +250°C
IR-Fusion® technology	Full infrared, PIP, Full visible, colour alarm
IR-Photonotes™ annotation system	Yes
Electronic compass	Yes
Multi-mode video recording	.AVI w/MPEG encoding
Voice annotation	Yes ( 60 seconds )
Laser pointer/torch	Laser Pointer and torch
Rechargeable batteries ( 4+ hours each )	1 rugged lithium-ion smart battery
Ruggedness and reliability	2-meter drop test, IP54 and integrated lens cap
Weight	0.726 kg ( 1.63 lbs )
Warranty	2 years, with additional available

## Price Each

Order Code	Product Code	Description	1+
WX60884 ‡	Ti110	Thermal Imager	£3,295.00

‡ Special delivery applies. Please ask for details

## Fluke Ti125 Thermal Imager



FLUKE

NEW

- Industrial and commercial maintenance made easy
- Technology isn't working for you if it's slowing you down.
- The Fluke Ti100 Series thermal imagers specifically designed to help you do more in less time, while being at home in the harshest of environments.
- Light, rugged, easiest-to-use professional imagers.
- IR-OptiFlex™ focus system
- Discover issues significantly faster with Fluke's revolutionary, ultra-rugged focus system.
- The IR-OptiFlex focus system gives you optimum focus by combining focus-free ease-of-use with the flexibility of manual focus on the same camera!
- IR-Fusion® technology
- Enjoy the industry's best point-and-shoot IR-Fusion camera. Fluke patented technology blends digital and infrared images into a single image to precisely document problem areas
- Rugged one-hand operation
- Experience the most rugged and reliable, lightweight professional camera around.
- One-touch focus, laser pointer, and torch. Point-and-shoot simplicity.
- No one builds more rugged, ergonomic tools than Fluke
- Multi-mode video recording
- Troubleshoot with the thermal imager that recording focus-free video invisible light and infrared with full IR-Fusion capabilities.
- Monitor processes over time, easily create infrared video reports, and troubleshoot.
- IR-PhotoNotes™ annotation system
- Get an exact reference to your problem area by capturing up to three digital photos per file. Add images of equipment, motor nameplates, workroom doors or any other useful or critical information.

### Technical Specification

Ti125	
Infrared resolution	160 x 120
Focus mechanism	IR-Optiflex focus
Temperature measurement range	-20°C to +250°C
IR-Fusion® technology	Full infrared, PIP, Full visible, colour alarm
IR-Photonotes™ annotation system	Yes
Electronic compass	Yes
Multi-mode video recording	.AVI w/MPEG encoding and .J33 radiometric
Voice annotation	Yes ( 60 seconds )
Laser pointer/torch	Laser Pointer and torch
Streaming video output	USB video output
Rechargeable batteries ( 4+ hours each )	2 rugged lithium-ion smart battery
Ruggedness and reliability	2-meter drop test, IP54 and intergrated lens cap
Weight	0.726 kg ( 1.63 lbs )
Warranty	2 years, with additional available

### Price Each

Order Code	Product Code	Description	1+
WX60885 ‡	TI125	Thermal Imager	£4,125.00

‡ Special delivery applies. Please ask for details

## Dewalt 10.8V XR Li-Ion Imaging Thermometer



DEWALT

NEW

- Patented imaging thermometer technology measures and displays temperature patterns
- Non-contact temperature measurement over a range of -10°C to 250°C
- Visual and thermal images can be blended to easily locate and identify faults
- Adjustable emissivity improves accuracy across a wide range of materials
- 56mm Colour LCD screen
- Intuitive user interface
- Photo capture and Micro SD Data recording
- Infrared Resolution - 15 x15 (225 pixel's) when temperature scanning.
- Visible Imaging Resolution - 105 x105 (11,025 pixel's) when an image is being taken.
- Screen Resolution - 320x240 (76,800 pixel's) through the view finder.
- Printed Photo Resolution - 210x137 (28,770 pixel's) when printing out an image.
- Standard Equipment: 1 x 1.5Ah XR Li-Ion battery pack, charger, 2GB Micro SD card, Heavy duty kitbox

### Price Each

Order Code	Product Code	1+	3+
WX60597	DCT416S1	£892.96	POA

## Condition & Vibration Monitoring

### Fluke 805 Vibration Meter



FLUKE

NEW

The reliable, repeatable, accurate way to check bearings and overall vibration. Make go or no-go maintenance decisions with confidence. The Fluke 805 Vibration Meter is a reliable vibration screening device available for front line mechanical troubleshooting teams that need repeatable, severity scaled readings of overall vibration and bearing condition

- Innovative sensor design minimizes measurement variations caused by device angle or contact pressure
- Consistent data quality at both low and high frequency ranges
- Four-level severity scale assesses urgency of problems for overall vibration and bearing condition

- Exportable data via USB
- Trending Microsoft® Excel using built-in templates
- Store data and machine ID and export to excel for data trending
- Overall vibration measurement ( 10 Hz to 1,000 Hz ) for acceleration, velocity and displacement units of measurement for a wide variety of machines
- Crest Factor + technology provides reliable bearing assessment using direct sensor tip measurements between 4,000 Hz and 20,000 Hz
- Coloured lighting system ( green, red ) and on-screen comments indicate how much pressure needs to be applied to take measurements
- Infrared temperature sensor increases diagnostic capabilities
- On-board memory holds up to 3,500 measurement
- Audio output for listening to bearing tones directly
- External accelerometer support for hard to reach locations
- Flashlight for viewing measurement locations in dark areas
- Large screen with high resolution for easy navigation and viewing

### Vibration Meter

Low frequency range (Overall Measurement)	10 Hz to 1,000 Hz
High frequency range ( CF + measure- ment )	4,000 Hz to 20,000 Hz
Severity Levels	Good, satisfactory, unsatisfactory, unacceptable
Vibration limit	50g peak ( 100g peak-peak )
A/D Converter	16-Bit
Signal to noise ratio	80dB
Sampling rate	
Low frequency	20,000 Hz
High frequency	80,000 Hz
Real time clock backup	Coin battery
Sensor	
Sensitivity	100mV / g ± 10%
Measurement range	0.01g to 50g
Low frequency range (Overall Measurement)	10 Hz to 1,000 Hz
High frequency range ( CF + measure- ment )	4,000 Hz to 20,000 Hz
Resolution	0.01g
Accuracy	At 100 Hz ± 5% of measured value
Amplitude units	
Acceleration	g, m/sec²
Velocity	in/sec, mm/sec
Displacement	mils, mm

### Price Each

Order Code	Product Code	Description	1+
WX60886	805	Vibration Meter	£1,171.00



**Personal protection equipment, see our Personal Protection Equipment section**

# FLUKE CNX WIRELESS TEAM.

## YOUR TOOLS...CONNECTED!



A suite of tools that connect together wirelessly to make your job easier. You solve problems faster. You troubleshoot quicker. That's revolutionary. That's Fluke.



### Wireless modules

*The team.* Fluke CNX tools work together. Remotely. Simultaneously. Conveniently.



### Wireless multimeter or thermal imager

*The captains.* Displays multiple readings in real time, at the same time, on one screen.



### Fluke software

*The statistician.* Transfer recorded data to your computer, and easily create analyses and reports.



Learn more: [Fluke.co.uk/CNX](http://Fluke.co.uk/CNX)

**FLUKE**®



## Fluke 810 Vibration Tester



FLUKE

- On-board identification and location of the most common mechanical faults (bearings, misalignment, unbalance, looseness) focus maintenance efforts on root cause, reducing unplanned downtime
- Fault severity scale with four severity levels helps you prioritize maintenance work
- Repair recommendations advise technicians on corrective action
- On-board context sensitive help provides real-time tips and guidance to new users
- 2 GB expandable on-board memory provides enough space for your machinery's data
- Self-test function ensures optimal performance and more time on the job
- Laser tachometer for accurate machine running speed promotes confident diagnoses
- Tri-axial accelerometer reduces measurement time by 2/3 over single axis accelerometers
- Viewer PC Software expands data storage and tracking capacity
- Use the Fluke 810 Vibration Tester to:
  - Troubleshoot problem equipment and understand the root cause of failure
  - Survey equipment before and after planned maintenance and confirm the repair
  - Commission new equipment and ensure proper installation
  - Provide quantifiable proof of equipment condition and drive investment in repair or replacement
  - Prioritize and plan repair activities and operate more efficiently
  - Anticipate equipment failures before they happen and take control of spare parts inventories
  - Train new or less-experienced technicians and build confidence and skill across the team

Includes:

- Vibration Tester with diagnostic technology
- Tri-axial accelerometer, magnet mount, mounting pad kit with adhesive, accelerometer quick-disconnect cable
- Laser tachometer and storage pouch
- Smart battery pack with cable and adapters
- Shoulder strap and adjustable hand strap
- Viewer PC software
- Mini USB to USB cable
- Getting Started Guide, illustrated quick reference guide, Users Manual CD-ROM,
- Carrying case

Please ask your local Brammer Branch or Sales Representative for more information and a possible demonstration

Price Each

Order Code	Product Code	Description	1+
WX54174 ‡	810	Vibration Meter	POA

‡ Special delivery applies. Please ask for details

## The SKF Machine Condition Advisor



- Designed to help simplify machine maintenance and prevent costly failures, the handheld SKF Machine Condition Advisor puts the benefits of machine monitoring within reach for any maintenance and operations teams
- By measuring machine vibration and temperature at the same time, the SKF Machine Condition Advisor can quickly and accurately assess the condition of rotating equipment throughout your facility
- Ideal for novice and expert users alike, the SKF Machine Condition Advisor makes it easy to implement basic maintenance practices without extensive training
- Suitable for a wide range of industrial rotating machinery, the SKF Machine Condition Advisor provides early warning of potential problems before failures occur
- Applications
  - Medium-sized and electrical machines (160-315mm shaft heights)
  - Large-sized and electrical machines (315mm+ shaft heights)
  - Multi-vane impeller pumps, integrated drivers, and more
- The SKF Machine Condition Advisor provides an overall "Velocity" vibration reading that measures vibration signals from the machine and automatically compares them to pre-programmed ISO standards. Simultaneously, the unit applies an SKF technique called "Enveloped Acceleration" and compares it to established bearing vibration guidelines to indicate conformity or potential bearing damage
- The SKF Machine Condition Advisor also measures temperature using an infrared sensor to indicate uncharacteristic heat
- Lightweight, compact, and ergonomically designed, the SKF Machine Condition Advisor fits neatly in the belt holster, in a pocket or in a toolkit
- Exceptionally durable, the unit is rated IP 54 for use in harsh operating environments
- Internal Vibration Sensor-integrated piezoelectric accelerometer
  - Range: 0.7-65 mm/s (RMS) 0.04-3.60 in/s meets ISO 10816
  - Frequency Range: 10-1000 Hz meets ISO 2954
- Optional remote accelerometer/sensor with cable and magnet for Machine Condition Advisor (CMAS 100-SL)
- Temperature Sensor: internal IR temp. sensor
  - Temp Range: -20 to 200 degrees C (-4 to 392 F)
  - IR Temp Accuracy: +/- 2 C (+/- 3.6 F)
  - Distance: Maximum 10 cm (4 in) from target.
  - Dimensions: length 200 mm width 47 mm height 25.4 mm
  - Weight: 125 g (4.4 oz)

Price Each

Order Code	Product Code	Description	1+
WX51149 ‡	CMAS-100-SL	Machine Condition Advisor	£1,217.97
WX60887 ‡	CMAC-105K	Sensor with cable	£453.87

‡ Special delivery applies. Please ask for details

## The SKF Machine Condition Indicator



- The SKF Machine Condition Indicator (MCI) is an economical single axis vibration monitor which can be stud or glue mounted
- Suitable for permanent monitoring of semi-critical machinery in plants with constant operating conditions & speeds from 900 – 3600 rpm
- The MCI measures:
  - Velocity for overall machine health (misalignment, imbalance etc)
  - Enveloped Acceleration to detect bearing degradation
  - Checks surface temperature
- The MCI has also built-in intelligence to avoid false alarming
- 3 year battery life (with one unacknowledged alarm)
- CMSS 200-02-SL SKF Machine Condition Indicator includes:
  - Two battery operated units, Two CMAC 225 read-keys (magnets), Two CMAC 230 threaded mounting studs (1/4-28 to 1/4-28), Two CMAC 231 adapter mounting studs (1/4-28 to M8), Two CMAC 200-REF reference cards, One Installation Instruction card, One product reference CD
- CMSS 200-10-SL SKF Machine Condition Indicator includes:
  - 10 battery operated units, Four CMAC 225 read-keys (magnets), Four CMAC 200-REF reference cards, Two Installation Instruction cards, One product reference CD
- CMSS 200-50-SL SKF Machine Condition Indicator includes:
  - 50 battery operated units, 10 CMAC 225 read-keys (magnets), CMAC 200-REF reference cards, Five Installation Instruction cards, One product reference CD
- The mounting studs are not included in the 10-pack CMSS 200-10-SL or 50-pack CMSS 200-50-SL and must be ordered separately

Price Each

Order Code	Product Code	Description	1+
WX60888	CMSS200-02-SL	MCI PK2	£312.30
WX60889 ‡	CMSS200-10-SL	MCI PK10	£1,353.30
WX60890 ‡	CMSS200-50-SL	MCI PK50	£4,892.70

Price Each

Order Code	Product Code	Description	1+
WX60891 ‡	CMAC231	Adaptor Mount Stud PK1	£3.33
WX60892 ‡	CMAC231-10	Adaptor Mount Stud PK10	£32.84
WX60893 ‡	CMAC231-50	Adaptor Mount Stud PK50	£131.38

‡ Special delivery applies. Please ask for details

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Test & Measurement



# Intelligent

and reliable SKF Machine Condition Indicator



## Reliability meets affordability

The stand-alone SKF Machine Condition Indicator is a robust, battery-operated machine vibration/temperature monitoring device that reliably highlights impending machine failures.

This rugged device monitors your plant's non-critical machinery without the need for expensive hard wiring and electrical power supply.

More intelligent than conventional sensors, the SKF Machine Condition Indicator is a smart device that takes measurements, verifies alarm condition and displays asset status via three multi-coloured LEDs.

### Customer benefits:

- When an alarm status is detected and verified, the three LED's on the unit will blink accordingly
- Performs assessments every three hours
- Use of filter bands with proven SKF Enveloped Acceleration results in highly reliable indications
- Provides early indication of bearing degradation

For further information visit: [www.skf.com/mci](http://www.skf.com/mci)



SKF (U.K.) Limited  
01582 490049  
[www.skf.co.uk](http://www.skf.co.uk)

**SKF**®



## Machine Health Checker



- A suite of easy to use and affordable hand held instruments
  - The ideal products for fast track into effective Condition Monitoring
  - With the optional Air Leak Detector turns it into a powerful instrument to help save energy
  - All work down to 35Rpm, most, to 0.25 Rpm
  - Training is available for all models
  - The data logging versions work from Windows 98 through to Vista
  - MHC (Machine Health Checker) – Memo Pro version will, if required, perform defect repetition analysis of enveloped spectra (Software included on the Memo Pro)
  - Dimensions on all products: HxVxD 470x370x160mm
  - Below we list the two most popular versions
- Accessories included:-
- Hard Carry case
  - Std Magnetic Mount sensor
  - Ear defender headphones
  - 230VAC battery charger
  - 2 sets of rechargeable batteries
  - Leads and monitoring pads

Other accessories available  
Air leak detector (see additional image)  
Permanent sensors  
Extended probes

Ask your local Sales & Service Centre for more details

### Price Each

Order Code	Product Code	Description	1+
WX43939 ‡	MHC-CLASSIC	Machine Health Checker	POA
WX38647	MEMOPRO	Data Analyser	POA
WX43940	AIR/40	Air Leak Detector	POA

‡ Special delivery applies. Please call for details

## Pen Vibration Meter



- Measures RMS Acceleration and Velocity with metric and imperial units
- Ranges — Acceleration (RMS): 656ft/s<sup>2</sup>; 20.39g; 200m/s<sup>2</sup>
- Velocity (RMS): 7.87in/s; 2.00cm/s; 200mm/s
- Wide frequency range of 10Hz to 1kHz
- Resolution to 1ft/s<sup>2</sup>
- 0.01g; 0.1m/s<sup>2</sup> and 0.02in/s; 0.01cm/s; 0.1mm/s
- Basic accuracy of ±(5% + 2 digits)

- Zero adjustment
- Data Hold freezes the reading in the display
- Water and dust resistant to IP65
- Low battery indicator
- Complete with test pin tip, magnetic base, 4 x AAA batteries and pouch case

### Price Each

Order Code	Product Code	Description	1+	3+
WX60894 ‡	VB400	Vibration Pen	£364.00	£346.57

‡ Special delivery applies. Please call for details

## Electronic Stethoscope TMST 3



- The noise or vibration from the machine is picked up by the stick probe and transmitted to a transducer
- In the transducer the vibrations are converted into an electrical signal, which is processed and amplified by the electronics of the instrument
- The handset has two outputs for the amplified signal
- One is for connecting the headset, the other to connect a tape recorder
- The headset is an approved ear defender in accordance with EN 352-1.1993 and pr EN 352-3
- Application:  
For detecting, tracing and diagnosing the source of all kinds of machinery noise. Damaged bearings, valve chatter, tappet noise, piston slap, gear and pump noise
- Technical Data:  
Frequency range; 30 Hz-15kHz  
Operating temperature; - 10 to + 45° C (14-113° F)  
Output volume; Adjustable in 32 levels  
Led indicator; Power on, Sound volume, Battery low  
Maximum recorder output; 250 mV  
Headset; 48 Ohm (with ear defender)  
Auto switch off; Yes, after 2 min  
Battery; 4 x AAA/R03 (included)  
Battery lifetime; 30 hours (continuous use)  
Dimensions; handset 220 x 40 x 40 mm (8,6 x 1,6 x 1,6 in)  
Probe length; 70 and 220 mm (2,8 and 8,7 in)  
Weight; Total weight 1 560 g (3,4 lb)

### Price Each

Order Code	Product Code	Description	1+
WX36066 ‡	TMST3	Stethoscope	£444.59

## Vibration Pen



- Measurement range RMS vibration velocity 0.1mm/s to 199.9mm/s
- Frequency range 10 Hz to 1 kHz
- Display 4 digit LCD display
- Hold value of last reading
- Accelerometer integrated
- Power supply 1.5V button cell batteries (2 pcs)
- Auto shut-off after 40 seconds

- Battery capacity approx 5 hours continuously
- Operating temperature 0°C to 40°C, < 85% RH
- Dimensions 150mm x 22mm x 18mm
- Weight approx 55gr including batteries

### Price Each

Order Code	Product Code	Description	1+	3+
WX37244 ‡	W-TV200	Vibration Pen	£350.92	POA

‡ Special delivery applies. Please call for details

## C-Cubed VM320 Vibration Analyser



NEW

- The VibMeter 320 is a simple to use vibration analyser. Results of the analysis are easy to understand with colour coded alarm screens.
- Overall vibration values with colour coded alarm levels for ISO values, bearing condition and machine fault diagnosis.
- High resolution zoom-able vibration spectrum display with fully dynamic cursor displaying frequency and amplitude values
- Frequency band alarms based on run speed (RS) can be used to diagnose machine faults due to unbalance (1x RS), misalignment (2x RS) and looseness (3x RS)
- Size 200 mm x 60 mm x 26 mm
- Weight 280g (not including magnet)
- Environmental  
Water, Sand & Dust: IP67 Waterproof  
Operating: 0°C to 50°C  
Storage: -20°C to 70°C
- Power supply 2 x AA batteries
- Battery life Auto power OFF - typically 50 hours operating time depending on brightness setting.
- Frequency range 2 Hz to 1 kHz (ISO), 1 kHz to 10 kHz (BDU)
- Max frequency resolution 1.25 Hz @ 800 lines FFT setting
- Displayed Vibration Amplitude Units Acceleration in g
- Velocity in mm/s (or inches/s)
- Bearing noise in BDU (bearing damage units)
- Displayed Frequency Units Hertz (Hz), RPM or CPM
- Input range +/- 50g
- Dynamic range 72 dB (0.05g resolution)
- VA diagnostic bands  
(RPM = run speed) Unbalance 1x RPM  
Misalignment 2x RPM  
Looseness 3x RPM
- Accessories: Screw in probe tip (1/4" UNF 28), Nylon carrying case
- Options: Accelerometer mounting magnet, Extended probe tip (stinger)

### Price Each

Order Code	Product Code	1+
WX60895 ‡	VM320	£320.00

‡ Special delivery applies. Please call for details

## C-Cubed VM330 Vibration Analyser with Trending Software





- The VibMeter 330 is a simple to use vibration analyser with PC based trending software. Results of the analysis are easy to understand with colour coded alarm screens. Exception warnings can be automatically e-mailed to designated people.
- Overall vibration values with colour coded alarm levels for ISO values, bearing condition and machine fault diagnosis
- High resolution zoom-able vibration spectrum display with fully dynamic cursor displaying frequency and amplitude values
- Frequency band alarms based on run speed (RS) can be used to diagnose machine faults due to unbalance (1x RS), misalignment (2x RS) and looseness (3x RS)
- VibTrend software enables PC based trending of an unlimited number of machines with up to ten measurement points per machine
- This graphical trending over time is a powerful tool in identifying wear in equipment over time – and scheduling maintenance to avoid failures
- Up to 1,000 Machines can be loaded from VibTrend as a route to the VM330.
- The VM330-PROFESSIONAL kit includes; VM330, BNC accelerometer, accelerometer magnet, unrestricted VibTrend software and USB docking cradle.
- Size 200 mm x 60mm x 26mm
- Weight 280g (not including sensor)
- Environmental
  - Water, Sand & Dust: IP67 Waterproof
  - Operating: 0°C to 50°C
  - Storage: -20°C to 70°C
- Power supply 2 x AA batteries
- Battery life Auto power OFF - typically 50 hours operating time depending on brightness setting.
- Frequency range 2 Hz to 1 kHz (ISO), 1 kHz to 10 kHz (BDU)
- Max frequency resolution 1.25 Hz @ 800 lines FFT setting
- Displayed Vibration
- Amplitude Units
- Acceleration in g
- Velocity in mm/s (or inches/s)
- Bearing noise in BDU (bearing damage units)
- Displayed Frequency Units
- Hertz (Hz), RPM or CPM
- Input range +/- 50g
- Dynamic range 72 dB (0.05g resolution)
- VA diagnostic bands, (RS = run speed), Unbalance 1x RS, Misalignment 2x RS, Looseness 3x RS
- Options:
  - Tacho strobe/flashlight attachment
  - Bluetooth headphones/ear defenders

## Price Each

Order Code	Product Code	1+
WX60896‡	VM330-PROFESSIONAL	£990.00
WX60897‡	VM33X-DOCK Docking cradle	£35.00
WX60898‡	HS100-CWCBL BNC Accelerometer	£168.00
WX60899‡	C312-233 Accelerometer Magnet	£82.00
WX60900‡	C3-BTHP Bluetooth Headphones	£390.00
WX60901‡	C3-STROBE Tacho Strobe	£75.00
WX60902‡	C312-372 100mm Stinger	£45.00

‡ Special delivery applies. Please call for details

## C-Cubed Pocket VibrA Ultra



- The Pocket VibrA Ultra is a rugged yet very portable Vibration Analyser with high resolution (up to 51,000 lines) and C-Trend software for trending of results and working with very detailed analysis to interpret envelope demodulation and bearing database information

- Fully waterproof & rugged IP67 construction
- High res (0.3Hz) frequency spectra from 0Hz to 15kHz
- Auto detects instability, unbalance, misalignment & looseness
- User selectable envelope demodulation filters
- Analyses bearing wear
- Built-in IEPE (constant current) accelerometer power supply
- Automatic RFID measurement point identification
- Saves and reads measurement values to/from RFID tags
- C-Trend Ultra software functionality:
  - Asset manager: Displays asset status (OK, warning or critical) for ISO levels, bearing quality etc, with date and time of readings, Assets are easily Created, Edited, Copied and Pasted Automatic set up and download of Routes to Pocket VibrA unit
  - Reports can be automatically created on individual or groups of assets (selected via the Report Wizard) as editable Word files with embedded Excel graphs for trends and frequency plots.
- Automatic emailing of alarms on upload of readings
- IP67 sealed against accidental immersion (1m for 30 min)
- Drop: MIL-STD-810F, Method 516.5, Procedure IV 26 drops from 1.22 m
- 6 additional drops at -20°, 6 additional drops at 60°
- Operating: -30° to 65°, Storage: -40° to 70°
- Humidity: MIL-STD-810F, Method 507.4
- Sand & Dust: IP67, MIL-STD-810F, Method 510.4, Procedures I & II
- Power supply Rechargeable battery (charger included)
- Battery life Typically 20 hours operating time depending on backlight usage.
- Frequency ranges 0 Hz to 1 kHz, 0 Hz to 15 kHz
- Frequency resolution Up to 0.3 Hz
- 400, 800, 1600, 3200, 6400, 12800, 25,600 or 51,200 lines FFT
- Displayed Amplitude Units Acceleration in g
- Velocity in mm/s (or inches/s)
- Bearing noise in BDU (bearing damage units)
- Displayed Frequency Units Hertz (Hz), RPM or CPM
- Input range +/- 50g with standard 25mV/g C-Cubed accelerometer
- Dynamic range 120 dB
- +/- 50g to +/- 0.0004g with standard accelerometer
- Auto set up of VA diagnostic bands (RPM = run speed) Instability 0 x RPM - 0.75 x RPM, Unbalance 0.75 x RPM - 1.5 x RPM. Misalignment 1.5 x RPM - 2.5 x RPM, Looseness 2.5 x RPM - 3.5 x RPM
- Envelope demodulation filters Fully user selectable high pass and low pass filter cut off frequencies
- IEPE accelerometer interface Constant current accelerometer power supply (+20 volts @ 2mA)
- Numeric Keypad or Touch screen operation Stylus free collection of maintenance data using numeric key pad or by touching screen
- Included accessories: Carrying case with neck strap, Stylus lanyard
- ‡ Special delivery applies. Please call for details

## Price Each

Order Code	Product Code	1+
WX60903 ‡	ULTRA	£6,000.00

## C-Cubed Pocket VibrA Balancer



- The Pocket VibrA Balancer is a rugged yet very portable field balancer. The easy to use Balancing Wizard provides step-by-step screens to lead even a novice user through single or two plane balancing jobs
- Balancing wizard
  - Single and two plane balancing wizard guides you through the process of balancing.
  - Graphical (vector plot) and data table presentation with colour coding.
  - Live vector plot shows stability of heavy spot.

- Built-in weight splitter for fixed point balancing (e.g. fan blades) ISO 1940/1 quality grade balancing system.
- Saves and Loads balancing sessions.
- Vibration units can be chosen as displacement, velocity or acceleration.
- Metric, Imperial or Custom units of measurement for mass and length.
- Angle measurement with or against rotation.
- RPM Measurement:
  - Measures rotation speed of equipment using optical probe and reflective tape.
  - Up to 50 000 RPM with 30° reflective tape cover.
  - Display in RPM and Hz.
  - Built-in Balancing Calculator:
    - Estimates trial weight for balancing process based on rotor weight, rotor speed and radius of trial weight.
    - Split or combine balancing weights
    - Drill depth calculator for removing weight from rotors
- Automatic report generator:
  - Saves editable balancing reports to PC for print out or archive
  - Includes all balancing parameters (run speed, measurements, weights and angles etc.)
  - Colour coded tables and vector plots displayed in report

Size 220 mm x 95mm x 45mm

## Rotor Types

Predefined rotor types for two plane balancing

Environmental

## ISO Quality Grade

Water  
: MIL-STD-810F, Method 512.4

G0.4/G1/G2.5/G6.2/G16/G40/G100/G250/G630

IP67 sealed against accidental immersion

(1m for 30 min)

## Accelerometer Connection

Drop  
: MIL-STD-810F, Method 516.5, Procedure IV

Standard 10 pin IP67 connected smart

26 drops from 1.22 m

accelerometer with built-in ID and sensitivity

6 additional drops at -20°C

calibration (nominally 25mV/g)

6 additional drops at 60°C

Operating: -30° to 65°C

## Vibration Measurement Units

Storage

Displacement

Humidity  
: MIL-STD-810F, Method 507.4

Velocity

Sand & Dust  
: IP67, MIL-STD-810F, Method 510.4,

Acceleration

Procedures I &amp; II

## Battery life

Typically 8-20 hours operating time depending on backlight usage.

## Balance View

Tabular and Graphical data representation

## RPM Measurement

10 RPM to 50,000 RPM

## Colour coded readings

Red: outside specified limit  
Green: inside specified limit

## Balancing RPM range

600 RPM to 6,000 RPM

## Dynamic range

+/- 50g to +/- 0.01g with standard

## Input range

+/- 50g with standard C-Cubed accelerometer

C-Cubed accelerometer

+/- 5g to +/- 0.001g with high sensitivity

+/- 5g with high sensitivity C-Cubed accelerometer

C-Cubed accelerometer

## Price Each

Order Code	Product Code	1+
WX60904 ‡	BALANCER	£6,000.00

‡ Special delivery applies. Please call for details

#### 4-Channel Vibration Meter/Data Logger



- Large backlit LCD display simultaneously displays four channels
- Selectable data sampling rate: 1, 2, 5, 10, 30, 60, 120, 300, 600, 1800, 3600 seconds
- Remote vibration sensor with magnetic adapter on 39"(1m) cable
- Wide frequency range of 10Hz to 1kHz
- Basic accuracy of  $\pm(5\% + 2 \text{ digits})$
- RMS or Peak Value measurement modes
- Data Hold, Auto Power Off
- Complete with 4 remote sensors, magnetic mounts, 8 x AA batteries, 100-240V Universal AC, Adaptor, SD card, and durable hard carrying case

#### Price Each

Order Code	Product Code	Description	1+	3+
WX60905 ‡	VB500	4Ch Vibration Meter	£2,685.00	£2,557.13

‡ Special delivery applies. Please call for details

#### Vibration Meter/Data Logger



- Remote vibration sensor with magnetic adapter on 47.2"(1.2m) cable
- Wide frequency range of 10Hz to 1kHz
- Basic accuracy of  $\pm(5\% + 2 \text{ digits})$ ; Meets ISO2954
- RMS, Peak Value or Max Hold measurement modes
- Adjustable data sampling rate
- Offset adjustment used for zero function to make relative measurements
- Large backlit LCD
- Stores 99 readings manually and 20M readings via 2G SD card
- Record/Recall MIN, MAX, Data Hold and Auto power off
- Built-in PC interface
- Complete with remote sensor, magnetic mount, 6 x AA batteries, SD card, and hard carrying case

#### Price Each

Order Code	Product Code	Description	1+	3+
WX60906 ‡	SDL800	Vibration Meter	£655.00	£623.87

‡ Special delivery applies. Please call for details

## Multimeter for Adjustable Speed Drives

### Introduction to the Fluke 87

- In the past, motor repair meant dealing with traditional three-phase motor failures that were largely the result of dust, failed bearings, misaligned shafts, or just plain old age. But motor repair has changed in a big way with the introduction of electronically controlled motors, more commonly referred to as adjustable speed drives (ASDs). These drives present a unique set of measurement problems.
- Thanks to new technology (the new Fluke 87 Series V), now for the first time you can take accurate measurements with a DMM during the installation and maintenance of a drive and diagnose bad components and other conditions that may lead to failure.

### Fluke 87 V Multimeter



- The Fluke 87 Series V is the ideal multimeter for measuring adjustable speed drives
- The meter offers high accuracy and all the measurement functions you need
- Accurate voltage and frequency measurements on PWM output of motor drives (patent pending)
- Built-in thermometer (probe included)
- AC True RMS measurements
- 4000 count resolution (20,000 count in high resolution mode)
- 20 kHz bandwidth
- Digital display with bargraph and backlight
- Min/max/average recording
- 50  $\mu$ s Fast Min-Max
- Touch Hold and relative modes
- Frequency, capacitance and duty cycle measurements
- Resistance, conductance, continuity and diode measurements
- Easy battery access without breaking the calibration seal
- Input alert warns when the leads are in the wrong inputs
- Classic design with removable holster
- Lifetime warranty
- Meets latest CAT IV safety standards

Functions	Maximum Range
Voltage DC	1000 V
Voltage AC	1000 V
Current DC	10A
Current AC	10A
Resistance	50M Ohm
Conductance	60nS
Capacitance	9999 $\mu$ F
Frequency	>200kHz
Temperature	-200 to 1090 °C
80BK temperature probe	-40 to 260 °C

Max. Resolution	Accuracy
10 $\mu$ V	$\pm(0.05\%+1)$
10 $\mu$ V	$\pm(0.7\%+2)$
0.01 $\mu$ A	$\pm(0.2\%+2)$
0.01 $\mu$ A	$\pm(1.0\%+2)$
0.01 Ohm	$\pm(0.2\%+1)$
0.001nS	$\pm(1.0\%+10)$
0.01nF	$\pm(1.0\%+2)$
0.01Hz	$\pm(0.005\%+1)$
0.1 °C	2.2 °C or 2%

#### Price Each

Order Code	Product Code	Description	1+	4+
WX30980	87V	87V Meter	£399.00	£387.92

## Heavy Duty Multimeter

### EXTECH EX510



- Waterproof (IP67) and drop-proof (6ft)
- Dual sensitivity frequency functions
- 0.09% basic accuracy
- CAT IV-600V

#### Function

Display	6000 count
Basic DCV accuracy	0.09%
AC/DC Current	20A
AC/DC Voltage	1000V
DC Voltage	600 V
Resistance	60M $\Omega$
Frequency (electrical)	400Hz
Frequency (electronic)	40MHz
Duty Cycle	0.1 to 99.9%

#### Price Each

Order Code	Product Code	1+	4+
WX43945	EX510	£109.00	£103.94

**We provide access to technical expertise through your local Sales and Service Centre and authorised suppliers**

## Insulation Multimeters

### 1587/1577 Insulation Multimeter



- Two products in one: powerful insulation tester and full-featured multimeter
  - Provides maximum versatility for troubleshooting and preventative maintenance
  - Reliable and easy to use
  - Ideal for work on motors, cables, and switchgear
  - Large display with backlight
  - Filter for motor drive measurements (1587 only)
  - Insulation test (1587: 0.01MΩ to 2Gohm), (1577: 0.1Mohm to 600Mohm)
  - Insulation test voltages (1587: 50V, 100V, 250V, 500V, 1000V), (1577: 500V, 1000V) for many applications
  - Live circuit detection prevents insulation test if voltage >30V is detected for added user protection
  - Auto-discharge of capacitive voltage for added user protection
  - AC/DC voltage, DC milliVolts, AC/DC milliAmps, Resistance (0.10-50Mohm), Continuity
  - Capacitance, Diode Test, Temperature, Min/Max, Frequency (Hz) (1587 only)
  - Auto power off to save battery power
  - CAT III - 1000V, CAT IV - 600V measurement category
  - Included accessories: Remote probe, test leads and probes, alligator clips, (K-type thermocouple - 1587 only)
  - Accepts optional Fluke TPAK magnetic hanging system to free your hands for other work
  - Included: Rugged, utility hard case
  - Made in USA
- Image shown is the 1587 model

#### Price Each

Order Code	Product Code		1+	4+
WX38631	1587	1587 Meter	£520.00	£505.56
WX38630	1577	1577 Meter	£438.00	£425.83
WX38645	C25	Soft Case	£42.00	£40.83

## Digital Multimeters

### Fluke 233 Remote Display Digital Multimeter



- The first Fluke digital multimeter with a detachable display is here
- The 233 wireless remote DMM allows maintenance professionals to address an age-old problem - display positioning
- The new Fluke 233 can be used for even the most common meter measurements and is especially suited for those situations where display viewing is challenging

- Removable magnetic display
  - No need to hold the meter to read measurement values
  - Improved visual focus on probes
  - Use as a conventional multimeter when the display is connected to the meter
  - Auto power off, radio is turned off when the display is connected to the meter
  - True-rms ac voltage and current for accurate measurements on non-linear signals
  - Large digit display with bright backlight
  - Displays may be interchanged between 233 meters
  - Counts 6000
  - Voltage: 1000 V AC/DC
  - Current: 10 A AC/DC
  - Resistance: 40 MΩ
  - Continuity / Diode
  - Capacitance: 10,000 μF
  - Frequency 500kHz
  - Min/Max/Avg Hold, Auto and Manual Range
  - Temp -40 °C to +400 °C (Display °C or °F)
  - Wireless Range 30 ft
  - Safety Rating CAT III 1000 V CAT IV 600 V
  - Warranty 3 Years
  - Size (H x W x L) cm 5.3 x 9.3 x 19.3
  - Weight 604 g
- Fluke 233 Remote Display Multimeter Includes:  
Getting Started Manual (Printed)  
AA Batteries, installed  
Test leads  
AC72 Alligator clips  
80BK-A Temperature Probe  
CD-ROM (user manual & technical notes and application images)

#### Price Each

Order Code	Product Code		1+	4+
WX45621	233		£248.00	£241.11

### 27 II & 28 II Multimeters - Waterproof & Rustproof!



- Waterproof & dustproof IP67 digital multimeters are designed for the toughest environments and users. These two new meters:
- Are made for customers who need a heavy duty, water and dust resistant digital multimeter
- Bring the old Fluke 27 up-to-date with a modern look, feel and feature set to match
- Have an improved feature set that extends the appeal of Fluke 27 by attracting industrial customers who work in harsh environments
- Address the needs of customers who prefer True-rms (Fluke 28 II) in a rugged DMM
- Have an extended operating temperature range -40° C to +55°C (5°F to 131°F) and 95% humidity for 20 minutes
- Are engineered and tested to withstand a 3 m (10.0 ft) drop with holster

Specification		27 II	28 II
DC voltage	Max. resolution	0.1 mV to 1000 V	0.1 mV to 1000 V
	Accuracy	0.1 % +1	0.05 % +1
AC voltage	Max. resolution	0.1 mV to 1000 V	0.1 mV to 1000 V
	Accuracy	0.5 % +3	0.7 % +4
DC current	Max. resolution	0.1 μA to 10 A	0.1 μA to 10 A
	Accuracy	0.2 % +4	0.2 % +4
AC current	Max. resolution	0.1 μA to 10 A	0.1 μA to 10 A
	Accuracy	1.5 % +2	1.0 % +2
Resistance	Max. resolution	0.1 to 50 ΩM	0.1 to 50 ΩM
	Display counts	6000	6000/19,999
Capacitance		1 nF to 9999 μF	1 nF to 9999 μF

Specification	27 II	28 II
Frequency	0.5Hz Hz to 199.990.5Hz Hz to 199.99 kHz	
Temperature	—	-200 °C to +1090 °C
Low pass filter	—	Yes
(Measurement on VSD's)	—	Yes
Compliance	CAT IV 600V, CAT III 1000V	CAT IV 600V, CAT III 1000V
IP rating	IP 67	IP 67
Power	3 x AA Batteries	3 x AA Batteries
Battery life	800 hours	800 hours

#### Price Each

Order Code	Product Code		1+	4+
WX45622	27II		£375.00	£364.58
WX45623	28II		£399.00	£387.92

### Fluke 170 Series Multimeters



- The three models of the Fluke 170 Series are the new benchmark for general purpose multimeters, combining accuracy, includes ease-of-use, safety and reliability in a tough package
- Certified for use in all areas of the workplace including the most demanding category 4 (Cat IV)
- The new 170-series have the following features:  
True RMS voltage and current measurements  
0.09% basic accuracy (177, 179)  
6000 count resolution  
Digital display with analogue bar graph  
Display backlight (177, 179)  
Manual and automatic ranging  
Display Hold and Auto Hold (automatic 'hands free' storage)  
Frequency and capacitance measurements  
Resistance, continuity and diode measurements  
Temperature measurement probe included (179)  
Min-max-average recording  
Smoothing mode for stable measurement of noisy signals  
Easy battery exchange without opening the case  
Closed case calibration through front panel  
Ergonomic case with integrated protective holster  
EN61010-1 CAT III 1000V / CAT IV 600V  
Lifetime warranty

Function	Max	Max Resolution
Voltage DC	1000V	0.1mV
Voltage	1000V	0.1mV
Current DC	10A	0.01mA
Current AC	10A	0.01mA
Resistance	50M Ohm	0.1 ohm
Capacitance	10,000μF	1nF
Frequency	100KHz	0.01Hz
Temperature	-40/400.C	0.1.C

#### Price Each

Order Code	Product Code		1+	4+
WX30975	175		£193.00	£187.64
WX30976	177		£210.00	£204.17
WX30977	179		£233.00	£226.53



## FLUKE-C90



### FLUKE

- Soft meter case from Fluke
- Zippered carrying case with inside pocket and belt loop
- Suitable for the following Fluke meters; 170 series, 80 series, 70 series, 27, 712, 714, 715, 717, 724, 725, 787, 789 meters and 50 series meters

#### Price Each

Order Code	Product Code	1+	4+
WX37146	C90	£28.80	£27.00

## EXTECH EX530



- Waterproof (IP67) and Drop-proof (6ft)
- Dual sensitivity frequency functions
- True RMS
- 0.06% basic accuracy
- CAT IV-600V
- 40,000 count display
- 20A current range

Function	
Display count	40000
Basic DCV accuracy	0.06%
AC/DC Current	20A
AC/DC Voltage	1000V
DC Voltage	600V
Resistance	40MΩ
Frequency	400Hz/100MHz
Capacitance	40mF
Temperature	-50 to 1382°F
Duty Cycle	0.1 to 99.9%

#### Price Each

Order Code	Product Code	1+	4+
WX43942	EX530	£157.00	£149.87

## Fluke 110 Series Multimeters



- The 110 range of multimeters pack more features than many other meters twice the size
- The 110-series have the following feature set:
  - True RMS measurements
  - 0.7% basic accuracy
  - 6000 count resolution
  - Digital display with analog bargraph
  - AC/DC current measurements (114, 117)
  - Backlight display (117)
  - Manual and automatic ranging
  - Display Hold
  - Frequency and capacitance measurements
  - Min-max-average recording
  - Resistance, continuity and diode measurements
  - Easy battery change without opening the case
  - Closed case calibration through front panel
  - Compact case with separate holster
  - EN61010-1 CAT III 600V
  - Three year warranty
- Image shown is the Fluke 117 model

Function	Max	Max Resolution	Accuracy
Voltage DC	600V	1mV	+ (0.7%+2)
Voltage AC	600V	1mV	+ (1.0%+3)
Current DC	10A	1mA	+ (1.0%+3) (111/112)
Current AC	10A	10mA	+ (1.5%+3) (111/112)
Resistance	40M Ohm	0.1 Ohm	+ (0.9%+1)
Capacitance	10,000µF	1nF	+ (1.9%+2)
Frequency	50KHz	0.01Hz	+ (0.1%+2)

#### Price Each

Order Code	Product Code	1+	4+
WX30969	114	£128.00	£124.44
WX30970	115	£151.00	£146.81
WX30971	117	£180.00	£175.00

## AVO 300 Series Multimeter



## Megger.

- The AVO300 range of Megger digital multi-meters are tough compact instruments designed for the contracting electrician, but are also suitable for a wide range of applications and users
- Both instruments offer a range of measurement modes for AC and DC applications, resistance and current measurement
- Designed for Electricians
- Fully auto ranging
- Large display characters
- Separate battery and fuse cover
- Data hold
- Min/Max store
- IEC 61010 compliant
- Suitable for applications to CATIII 600 V
- Three ranges are provided for current measurement of either AC or DC current from 0.1uA to 10A; fused inputs protect both the user and the instrument in the case of excess current
- Resistance can be measured directly on the ohms range from 0ohms up to 1.999Mohms
- A continuity buzzer range is also available for checking low resistance between two points
- The buzzer sounding if the resistance is less than 50ohms (35ohms on the AVO310)
- Additionally a diode range exists for testing forward and reverse bias operation of transistors and diodes
- A low battery indicator warns when batteries are low, and an auto-off function ensures no unnecessary battery wastage occurs if accidentally left on
- Display:
  - AVO300: 4000 counts LCD display, 25.4mm high
  - AVO310: 4000 counts LCD display, 20mm high
- Backlight on AVO310 only
- The Max/Min function on the AVO310 freezes the maximum or minimum measured result on the screen so display does not have to be continually watched to capture a momentary increase or fall in circuit voltage, resistance or current

#### Price Each

Order Code	Product Code	1+	4+
WX53601	AVO300	£86.37	£83.67
WX53602	AVO310	£96.53	£93.52

## C50 MultiMeter Case



### FLUKE

- Soft meter case from Fluke
- Zippered carrying case with inside pocket belt loop and inside meter strap
- Dimensions: (H x W x D) 192 x 90 x 38 mm
- Suitable for the following Fluke meters; 110 series, 70 series, 27 meter and 50 series

#### Price Each

Order Code	Product Code	1+	4+
WX36035	C50	£28.00	£27.22

Can't see it here,  
just call  
0870 240 2100

### MM34 General Purpose Multimeter



**MARTINDALE**  
ELECTRIC

**NEW**

- The Martindale MM34 is a general purpose multimeter, suitable for a range of standard applications
- It has four main functions, AC Volts, DC Volts, DC Amps and Ohms, along with a diode test and battery test
- Readings are clearly displayed on the large 3 1/2 digit LCD display and it's ergonomic design makes it comfortable to hold and the rotary dial makes selection of the required range simple
- The MM34 is supplied with standard test leads, battery and instruction manual
- AC Voltage: 100mV to 600V (2 ranges), 50Hz - 500Hz
- DC Voltage: 1mV to 600V (4 ranges)
- DC Current: 0.1µA - 10A (5 ranges)
- Resistance: 0.1Ω to 20MΩ (5 ranges)
- Battery Test: 1.5V & 9V
- Diode test
- Overvoltage: CAT III 600V
- Dimensions: 143 x 68 x 47mm
- Weight: 206g approx

Price Each

Order Code	Product Code	1+	3+
WX60907	MM34	£33.00	£31.68

### MM39 Digital Multimeter



**MARTINDALE**  
ELECTRIC

**NEW**

- The Martindale MM39 multimeter is autoranging and features a large rotary knob for easy selection of the required test, even when wearing gloves
- There are two additional buttons, one to lock the range and the other to hold the result on the display
- The multimeter functions include DC Volts, AC Volts, AC Amps, Ohms, Continuity with Audible Indication and Diode Test.
- Each MM39 multimeter is supplied with standard test leads, batteries, protective rubber holster and instruction manual.
- AC Voltage: 0.1mV to 600V (5 ranges), 50Hz - 500Hz
- DC Voltage: 0.1mV to 600V (5 ranges)
- AC Current: 0.01A to 10A, 50Hz to 500Hz
- DC Current: 0.01A - 10A
- Resistance: 0.1Ω to 20MΩ (6 ranges)
- Continuity Buzz at <25Ω
- 3 1/2 digit LCD display
- Auto polarity & zero
- Data hold
- Diode test
- Overvoltage: CAT III 600V
- Dimensions: 143 x 68 x 47mm
- Weight: 315g approx

Price Each

Order Code	Product Code	1+	3+
WX60908	MM39	£36.00	£34.56

### MM44 General Purpose Digital Multimeter



**MARTINDALE**  
ELECTRIC

**NEW**

- With 11 functions, including a 10A range, and a basic accuracy of 0.8%, this is a great all-round multimeter
- Main functions include AC Volts, DC Volts, DC Amps, AC Amps, Ohms, Capacitance, Frequency, Battery Test, Diode Test, Transistor Test, Logic Test & Continuity Test with Audible Indication.
- The meter features ceramic fuse protection and will beep if the leads are incorrectly connected, to prevent misuse.
- Each MM44 multimeter is supplied with standard test leads, battery, protective rubber holster, spare fuse and instruction manual
- AC Voltage: 100mV to 600V (5 ranges), 50Hz - 500Hz
- DC Voltage: 100µV to 600V (5 ranges)
- AC Current: 10µA to 10A (3 ranges), 50Hz to 500Hz
- DC Current: 10µA - 10A (4 ranges)
- Resistance: 100mΩ to 2000MΩ (7 ranges)
- Continuity Buzz at <100Ω
- Capacitance: 1pF to 20µF (5 ranges)
- Logic Test: Hi 2.8V +/- 0.8V, Lo 0.8V +/- 0.5V
- Frequency: 1Hz to 15MHz (5 ranges, autoranging)
- Battery Test: 1.5V, 9V
- 3 1/2 digit LCD display with automatic polarity and zero
- Diode & Transistor test
- Overvoltage: CAT III 600V
- Dimensions: 147 x 70 x 39mm
- Weight: 345g approx

Price Each

Order Code	Product Code	1+	3+
WX60909	MM44	£65.00	£62.40

### EXTECH EX470



**EXTECH**  
INSTRUMENTS  
A FLIR COMPANY

- Built-in IR Thermometer with laser pointer
- True RMS
- Capacitance, Frequency and temperature
- 0.3% basic accuracy
- 1000VDC/750AC Voltage ranges
- 20A AC/DC Current ranges

Function

Display count	4000
IEC 1010 CAT	III
Basic DCV accuracy	0.03%
AC/DC Current	20A
AC/DC Voltage	1000VDC/750AC
Resistance	40MΩ
Frequency	10MHz
Capacitance	100µF
Type K Temperature	-4 to 1382°F
Infrared Temperature	-58 to 518°F
Duty Cycle	0.1 to 99.9%

Price Each

Order Code	Product Code	1+	4+
WX43943	EX470	£112.00	£106.54

### EXTECH EX205T TRMS Autoranging Multimeter



**EXTECH**  
INSTRUMENTS  
A FLIR COMPANY

**NEW**

- True RMS for better accuracy when measuring distorted waveforms
- 2000 count large backlit dual LCD with easy-to-read digits
- Low current capability with resolution to 0.1µA
- Input fuse protection
- Max Hold, Data Hold and Auto power off
- Complete with test leads and 9V battery

Specifications	Range	Max Resolution
AC Voltage	600V	0.1mV
DC Voltage	600V	0.1mV
Basic Accuracy	(VDC) ±0.5%	
AC Current	10A	0.1µA
DC Current	10A	0.1µA
Resistance	20MΩ	0.1Ω
IR Temperature (EX210T only)	-5 to 446°F / -20 to 230°C	0.1°
Continuity / Diode	Yes	
Dimensions	5.8x2.9x1.6" (147x76x42mm)	
Weight	9.17oz (260g)	

Price Each

Order Code	Product Code	1+	4+
WX60910	EX205T	£55.00	£51.95

## Amprobe 15XP Digital Multimeter



- Auto-ranging / Manual range hold
- 2000 Count, 3½ digits, 0.5% basic accuracy
- 750 Vac / 1000 Vdc
- AC / DC, resistance
- Built-in non-contact voltage detector (audible and visual indicators)
- Continuity, Diode test, Data Hold
- TTL logic test
- Auto Power Off
- Overload protection / Input warning
- CAT I 1000V, II 600V, CAT III 300V rated
- Included with Instrument: test leads, 9V battery (installed), Magne-Grip TM holster, magnet hanging strap and operating instructions

Price Each

Order Code	Product Code	1+	4+
WX38657	15XP-B	15XP-B Meter	£56.00 £54.19

## Amprobe 5XP Digital Multimeter



- The 5XP-A Digital Multimeter provides superior features and accuracy in a smaller form factor
- The 5XP has unique features such as VolTest non-contact voltage (NCV) detection and our exclusive Magne-Grip holster that frees both hands for work
- 10 functions/ 27 ranges
- 2000 Count, 3½ digits, 1% basic accuracy
- 750 Vac / 1000 Vdc
- AC / DC, resistance
- Built-in non-contact voltage detector (audible and visual indicators)
- Continuity, Diode test, Data Hold
- Min-Max recording, Data Hold
- Battery test
- Overload protection / Input warning
- CAT I 1000V, II 600V, CAT III 300V rated
- Included with Instrument: test leads, 9V battery (installed), Magne-Grip TM holster with magnet hanging strap and operating instructions

Price Each

Order Code	Product Code	1+	4+
WX38658	5XP-A	5XP-A Meter	£36.00 £34.84

## DM73B Digital Test Probe Meter



- Meter with built-in test probe for one-hand operation
- Unique pen shape auto-ranger
- Small and light, goes anywhere
- Allows one-hand operation in tight spots
- 3400-count display with analog bargraph
- Current: 600 V AC/DC
- Data Hold and Auto-Off
- Voltage: 600V AC/DC
- Continuity beeper
- Diode test

Price Each

Order Code	Product Code	1+	4+
WX32040	DM73B	DM73B Meter	£53.00 £51.29

## CB12 Calibration Check Box



- The CB12 calibration checkbox is designed to check the calibration of the continuity and resistance ranges of insulation testers & multimeters, providing a quick check to ensure the instrument being used is giving an accurate reading
- By checking an instrument regularly the user can verify that measurements taken are accurate, within the tolerances of the instrument and the check box
- It is not designed to check loop testers, where the high test current will damage the CB12
- The Calibration Check Box is simple to use, simply connect the instrument under test to the checkbox via the 4mm terminals on the front of the checkbox
- Select a resistance value via the dial on the front of the checkbox. Set the instrument under test to the relevant test range and either check the values or run an insulation test to check the values are within the appropriate limits.

Resistance Settings:

0.5Ω, 1Ω, 2Ω, 20Ω, 200Ω, 1kΩ, 10kΩ, 20kΩ, 100kΩ, 1MΩ, 2MΩ, 10MΩ

Accuracy:

0.5Ω - 2Ω ± 0.025Ω 20Ω - 10MΩ ± 2%

Maximum Voltage Input: 1000V DC

Case: Impact Resistant ABS

Price Each

Order Code	Product Code	1+	3+
WX60911	CB12		£49.50 £47.52

**On site technical support and advice available**



## TL220 SureGrip Industrial Test Lead Kit



- Test Lead Kit in an all-in-one handy kit that includes the following:
- AC220 SureGrip alligator clip set
- TP220 SureGrip test probe set
- TL222 SureGrip silicone test lead set (right to right)

Price Each

Order Code	Product Code	1+	4+
WX60912	TL220-1		£54.00 £52.50

## TL76 All-In-One Test Lead Set



- One pair (red, black) 1.5 metre long silicone test leads with right angle shrouded banana plug
- Lantern tip (removable) for use with European wall sockets (4mm Ø)
- Lantern tip can be removed for easy access to terminal blocks (2mm Ø)
- Removable, insulated IC caps allow probing on closely spaced leads and compliance with GS38
- Cat IV 600 V, CAT III 1000 V, 10 A rating, UL listed

Price Each

Order Code	Product Code	1+	4+
WX36041	TL76		£29.00 £28.19

## L215 SureGrip Kit with Probe Light & Extender



- L200 Probe Light
- TP280 20cm Test Probe Extenders
- TP220 SureGrip Test Probes
- TL224 SureGrip Silicon Test Lead Set
- Foldable soft pouch with six pockets and hook-and-loop

Price Each

Order Code	Product Code	1+	4+
WX36036	L215		£63.00 £61.25





NEW

MARTINDALE  
ELECTRIC

- Red & black unfused test leads with lantern tips & probe caps supplied with crocodile clips and shrouded tip, terminated with 4mm banana plug
- Double insulated PVC lead
- Suitable for general purpose use.

Price Each

Order Code	Product Code		1+	3+
WX60913	TL45	Right Angle Fixed Shroud	£22.46	£21.56
WX60914	TL47	Straight Fixed Shroud	£22.46	£21.56

**We provide access to technical expertise through your local Sales and Service Centre and authorised suppliers**

## Clamp Meters

### 374 and 375 True-RMS AC/DC Clamp Meters



FLUKE

- Work horse clamps with increased performance and flexibility
- The new Fluke 374 and 375 clamp meters offer improved performance perfect for many current measurement situations
- With True-RMS ac voltage and current measurements, the Fluke 374 and 375 can read up to 600 V and 600 A in both ac and dc modes
- Additionally, both are compatible with the new iFlex™ flexible current probe (sold separately) which expands the measurement range to 2500 A ac and provides increased display flexibility, ability to measure around awkward sized conductors and improved wire access
- iFlex™ flexible current probe expands the measurement range to 2500 A ac while providing increased display flexibility, ability to measure awkward sized conductors and improved wire access
- CAT IV 600V, CAT III 1000 V safety rating
- Integrated low pass filter (Fluke 375 only) and state of the art signal processing allows for use in noisy electrical environments while providing stable readings
- Proprietary inrush measurement technology to filter out noise and capture motor starting current exactly as the circuit protection sees it
- Ergonomic design fits in your hand and can be used while wearing personal protective equipment
- Large, easy to read, backlight display automatically sets the correct measurement range so you do not need to change switch positions while taking a measurement
- Three-year warranty
- Soft carrying case
- Other joint features for both 374 and 375 include: True-RMS Continuity Hold Backlight Min/Max Inrush
- Low pass filter only with Fluke 375
- 45 cm (18 inch) iFlex™ and 25 cm (10 inch) iFlex™ flexible current probes as optional accessory
- 34mm Wire capacity

Fluke 374 and 375 Range	Max Resolution	Accuracy
AC current via jaw 600 A	0.1 A	2 % ± 5 digits
AC current via iFlex™ (optional) 2500 A	0.1 A	3 % ± 5 digits
DC current 600 A	0.1 A	2 % ± 5 digits
AC voltage 600 V	0.1 V	1.5 % ± 5 digits
DC voltage 600 V	0.1 mV (375) 0.1 V (374)	1 % ± 5 digits
Resistance 60,000 Ω (375) 6000 Ω (374)	0.1 Ω	1 % ± 5 digits
Frequency (375 only) 500 Hz	0.1 Hz	0.5 % ± 5 digits
Capacitance 1 µF to 1000 µF	1 µF	1 % ± 4 digits

Price Each

Order Code	Product Code		1+	4+
WX53589	374	374 True-RMS AC/DC	£265.00	£257.64
WX53590	375	375 True-RMS AC/DC	£317.00	£308.19
WX53591	I2500-10	i2500-10 iFlex Current Probe 25 cm	£89.00	£86.53
WX53592	I2500-18	i2500-18 iFlex Current Probe 45 cm	£89.00	£86.53

### 376 True-RMS AC/DC Clamp Meter with iFlex™



FLUKE

- The new Fluke 376 Clamp Meter offers improved performance perfect for a wide range of current measurement situations
- With True-RMS ac voltage and current measurements, the Fluke 376 can read up to 1000 V and 1000 A in both ac and dc modes
- Additionally, the Fluke 376 includes the new iFlex™ flexible current probe expanding the measurement range to 2500 A ac while providing increased display flexibility, ability to measure around awkward sized conductors and improved wire access
- The Fluke 376 is the direct replacement for the Fluke 337 Clamp Meter
- CAT IV 600 V, CAT III 1000 V safety rating
- Integrated low pass filter and state of the art signal processing allows for use in noisy electrical environments while providing stable readings
- Proprietary inrush measurement technology to filter out noise and capture motor starting current exactly as the circuit protection sees it
- Ergonomic design fits in your hand and can be used while wearing personal protective equipment
- Large, easy to read, backlight display automatically sets the correct measurement range so you do not need to change switch positions while taking a measurement
- Three-year warranty
- Soft carrying case
- Other features include: Continuity Hold Backlight Min/Max/Avg Inrush Low pass filter 45 cm (18 inch) iFlex Flexible™ included Current Probe Wire capacity 34mm

Fluke 376	Range	Resolution	Accuracy
AC current via jaw	999.9 A	0.1 A	2 % ± 5 digits
AC current via iFlex™	2500 A	0.1 A	3 % ± 5 digits
DC current	999.9 A	0.1 A	2 % ± 5 digits
AC voltage	1000 V	0.1 V	1.5 % ± 5 digits
DC voltage	1000 V	0.1 mV	1 % ± 5 digits
Resistance	60,000 Ω	0.1 Ω	1 % ± 5 digits
Frequency	500 Hz	0.1 Hz	0.5 % ± 5 digits
Capacitance	1000 µF	1 µF	1 % ± 4 digits

Price Each

Order Code	Product Code		1+	4+
WX53593	FLUKE-376	376	£379.00	£368.47
WX53591	FLUKE-I2500-10	i2500-10 iFlex Current Probe 25 cm	£89.00	£86.53

### 381 Remote Display True-RMSAC/DC Clamp Meter



#### FLUKE

- The first clamp meter with a detachable, remote display for easier, faster, safer measurements
- Wireless technology allows the display to be carried up to 10 m away from the point of measurement for added flexibility without interference with measurement accuracy
- iFlex™ flexible current probe expands the measurement range to 2500 A ac while providing increased display flexibility, ability to measure awkward sized conductors and improved wire access
- CAT IV 600V, CAT III 1000 V safety rating
- Integrated low pass filter and state of the art signal processing allows for use in noisy electrical environments while providing stable readings
- Proprietary inrush measurement technology to filter out noise and capture motor starting current exactly as the circuit protection sees it
- Ergonomic design fits in your hand and can be used while wearing personal protective equipment
- The removable magnetic display can be conveniently mounted where it is easily seen
- Radio transmitter automatically turns off when the display is connected to the meter
- Large, easy to read, backlight display automatically sets the correct measurement range so you do not need to change switch positions while taking a measurement
- Three-year warranty
- Soft carrying case
- Other features include:
  - True-RMS
  - Continuity
  - Hold
  - Backlight
  - Min/Max
  - Inrush
  - Low pass filter
  - Removable wireless display
  - 45 cm (18 inch) iFlex™ Flexible Current Probe included
  - 25 cm (10 inch) iFlex™ Flexible Current Probe as accessory if required
  - Wire capacity is 34mm

Fluke 381	Range	Resolution	Accuracy
AC current via jaw	999.9 A	0.1 A	2 % ± 5 digits
AC current via iFlex™	2500 A	0.1 A	3 % ± 5 digits
DC current	999.9 A	0.1 A	2 % ± 5 digits
AC voltage	1000 V	0.1 V	1.5 % ± 5 digits
DC voltage	1000 V	0.1 V	1 % ± 5 digits
Resistance	60,000 Ω	0.1 Ω	1 % ± 5 digits
Frequency	500 Hz	0.1 Hz	0.5 % ± 5 digits

#### Price Each

Order Code	Product Code	1+	4+
WX53594	381	£444.00	£431.67

### Fork Clamp/Multimeter



#### Megger

- The Megger DCM330 Fork Multimeter is a convenient, compact instrument designed to measure ac current up to 200 A, and additionally perform all the functions of a basic multimeter
- 200.0 A a.c. open-jaw current measurement
- 0.1 V to 1000 V auto-ranging a.c. and d.c. voltage measurement
- 0.1 Ω to 20.00 MΩ resistance range
- Continuity buzzer
- Diode check
- Non-contact detection of a.c. voltage

#### Price Each

Order Code	Product Code	1+	4+
WX53603	DCM330	£106.69	£103.36

### Fluke Clamp Meter



#### FLUKE

#### NEW



- 400 A ac current measurement
- 600 V ac and dc voltage measurement
- True-rms ac voltage and current for accurate measurements on non-linear signals
- Resistance measurement up to 4000 Ω with continuity detection (325 40kΩ)
- Slim, ergonomic design
- CAT IV 300 V/CAT III 600 V safety rating
- Hold button
- Two-year warranty
- Soft carrying case

#### Price Each

Order Code	Product Code	Description	1+	4+
WX38633	323	Clamp Meter	£99.00	£95.81
WX60915	324	Clamp Meter	£118.00	£114.19
WX60916	325	Clamp Meter	£159.00	£153.87

Specification	323	324	325
AC Current range	400.0A	40.00A/400.0A	40.00A/400.0A
DC Current range	-	-	40.00A/400.0A
Continuity	≤ 70Ω	≤ 30Ω	≤ 30Ω
Capacitance	-	100.0 μF to 1000 μF	100.0 μF to 1000 μF
Frequency	-	-	5.0 Hz to 500.0 Hz
Backlight	-	Yes	Yes
Contract temperature	-	-10°C to 400.0°C (14.0°F to 752.0°F)	-10°C to 400.0°C (14.0°F to 752.0°F)
Min/Max	-	-	Yes
Weight	265g	208g	283g

### CM54 1000A AC Clamp Meter



#### MARTINDALE ELECTRIC

#### NEW

- The Martindale CM54 is a low cost 1000A AC clamp meter, with basic multimeter functions
- It has a large jaw diameter at 57mm, capable of clamping round a 70 x 18mm busbar.
- Along with AC current, this clamp meter will also measure AC & DC volts, resistance, continuity, and includes Max & Hold buttons.
- The Martindale CM54 is supplied with standard test leads, carry case and battery.
- Display: 3 1/2 digit LCD with large 21mm digits
- AC Voltage: 1V to 750V (50Hz to 500Hz), Accuracy: +/- 1.5% + 4 digits
- DC Voltage: 1V to 1000V, Accuracy: +/- 0.5% + 4 digits
- AC Current: 100mA to 1000A (2 ranges), 50 / 60Hz Accuracy: 0 - 600A +/- 1.5% + 5 digits; >600A +/- 2.0% + 5 digits
- Resistance Ranges: 200Ω, 20kΩ, 20MΩ, 2000MΩ Resolution: 0.1Ω on 200Ω range
- Accuracy Ranges
  - 200Ω: +/- 1.2% + 4 digits
  - 20kΩ: +/- 1.0% + 3 digits
  - 20MΩ: +/- 2.0% + 5 digits
  - 2000MΩ: +/- 5% + 10 digits
- Continuity: Buzz at <75Ω
- Dimensions: 277 x 102 x 49mm
- Weight: 540g approx

#### Price Each

Order Code	Product Code	1+	3+
WX60917	CM54	£91.67	£88.00

**We can supply the entire range. If you can't see it here, just call 0870 240 2100**

## CM56 1000A AC/DC Voltage Clamp Meter



**MARTINDALE**  
ELECTRIC

**NEW**

- The Martindale CM56 1000A AC clamp meter is ideal for general purpose use
- It includes basic multimeter functions and features a large LCD display with analogue bar graph.
- Adding to the features of the CM54, this clamp meter gives you AC & DC voltage, resistance, continuity and frequency
- The jaw diameter is 57mm, and can be clamped around a 70 x 18mm busbar.
- Max hold and AC peak functions complete the great features of this clamp.
- The Martindale CM56 is supplied with standard test leads, instruction manual, soft carry case and battery.
- Display: 3 1/2 digit LCD with bargraph
- AC Voltage: 1mV to 750V autoranging, 50Hz to 300Hz, Accuracy: +/- 1.5% + 4 digits
- DC Voltage: 0.1mV to 1000V (5 ranges), Accuracy: +/- 0.5% + 1 digit
- AC Current: 10mA to 1000A (3 ranges), 50 - 400Hz Accuracy: 0 - 600A +/- 1.5% + 5 digits; >600A +/- 2.0% + 5 digits
- Resistance Ranges: 320Ω, 3.2kΩ, 32kΩ, 320kΩ, 3.2MΩ, 30MΩ
- Resolution: 0.1Ω on 320Ω range
- Accuracy Ranges
- 320Ω to 320kΩ: +/- 1.0% + 3 digits
- 3.2MΩ: +/- 1.5% + 3 digits
- 30MΩ: +/- 2.5% + 5 digits
- Continuity: Buzz at <20Ω
- Frequency: 0.1Hz - 32kHz (3 ranges)
- Diode Test
- Dimensions: 277 x 102 x 49mm
- Weight: 540g approx

Price Each

Order Code	Product Code	1+	3+
WX60918	CM56	£112.27	£107.78

## CM58 1000A AC/DC True RMS Clamp Meter



**MARTINDALE**  
ELECTRIC

**NEW**

- Representing outstanding value for money, this clamp is feature packed measuring AC & DC volts, resistance, frequency & continuity as well as a diode test
- The large 3 1/2 digit LCD display has a 42 segment analogue bar graph, giving better resolution of changing readings
- Additional features include Max & Min reading memories, along with Peak & Hold
- The clamp is autoranging as standard, but has a manual range change / hold for optional override of the autorange function.
- The Martindale CM58 is supplied with standard test leads, soft carry case, battery and instruction manual.
- AC Voltage: 0.1mV to 750V autoranging, 50Hz to 500Hz (5 ranges), Accuracy: +/- 1.5% + 4 digits
- DC Voltage: 0.1μV to 1000V autoranging (5 ranges), Accuracy: +/- 0.5% + 1 digit
- AC Current: 100mA to 1000A (2 ranges), true-RMS, 50 - 400Hz Accuracy: 0 - 600A +/- 1.5% + 5 digits; >600A +/- 2.0% + 5 digits
- DC Current: 100mA to 1000A (2 ranges) Accuracy: 0 - 600A +/- 1.5% + 5 digits; 600 - 800A +/- 2.5% reading +/- 5 digits; >800A +/- 3.5% + 5 digits
- Resistance Ranges: 100mΩ to 40MΩ (6 ranges)
- Capacitance: 1pF to 40μF, autoranging (5 ranges)
- Continuity: Buzz at <40Ω
- Frequency: 0.1Hz - 400kHz, autoranging (5 ranges)
- Max Conductor: 57mm Ø or 70 x 18mm bus bar
- Diode Test
- Dimensions: 277 x 102 x 49mm
- Weight: 540g approx

Price Each

Order Code	Product Code	1+	3+
WX60919	CM58	£189.00	£181.44

## AD40B Clamp Meter



**AMPROBE**

- Compact Clamp Meter measures up to 400A AC in tight spaces
- Measures low AC current in 40A range.
- Auto-ranging, 400A range
- 10mA resolution in 40A range
- 4000-count display with bargraph
- Autoranging
- Data Hold and Auto-Off
- CAT III 600V rated

Price Each

Order Code	Product Code	1+	4+
WX32039	AD40A	£68.00	£65.81

## EXTECH EX623



**EXTECH**  
INSTRUMENTS  
A FLIR COMPANY

- Built-in dual thermocouple inputs
- Built-in non-contact voltage detector
- InfraRed thermometer
- DC μA multimeter function
- True RMS
- 40,000 count
- DC current
- Dual Type K & IR temperature
- Capacitance & Frequency
- Jaw size 1.4"

Function

Display count	40000
ACA accuracy	1.5%
AC/DC Current	400A
AC Voltage	600V
DC Voltage	600V
DC μA current	4000μA
Resistance	40MΩ
Frequency	40MHz
Capacitance	40,000μF
Temperature (type K)	-58 to 1832°F - Dual Inputs
Temperature (Infrared)	-58 to 518°F

Price Each

Order Code	Product Code	1+	4+
WX43944	EX623	£178.00	£169.80

## AC75 Clamp Meter



**AMPROBE**

- Three tools in one: Clamp Meter, Multimeter, Thermometer
- 600Amps AC, Special microAmp measurement
- Digital thermometer 750°F, Type K probe included
- 750 Vac / 1000 Vdc
- 40MW resistance
- Capacitance to 4000 μF
- Continuity
- Large backlit display, 4000 Ohm count
- Data Hold
- Auto Power Off
- CAT III 600V, CAT II 1000V safety rated
- Deluxe carry case with belt loop
- Convenient battery door access

Price Each

Order Code	Product Code	1+	4+
WX38659	AC75B	£111.00	£107.42

**For Lockouts and Tagouts, see our Site Safety section**





- This unique model includes built in non-contact InfraRed temperature measurements with laser pointer
- True RMS
- Peak hold captures inrush currents and transients
- Type K temperature
- High resistance, capacitance & frequency ranges
- 1.7" jaw size

Function	
AC Current	1000A
DC Current	1000A
AC Voltage	600V
DC Voltage	600 V
Resistance	40MΩ
Capacitance	40mF
Frequency	4kHz
DC Voltage	400.0 V
Temperature (Infrared)	-50 to 270°C
Temperature (Type K)	-70 to 760°C

Price Each

Order Code	Product Code	1+	4+
WX43946	EX830	£157.00	£149.87

For a full  
range of  
hand tools,  
see our  
Hand  
Tools  
section



FLUKE

- The Fluke 365 is a new, innovative Fluke clamp meter, offering a thin, small jaw design that makes it easy to get around tightly packed wires
- 200 A ac and dc current measurement with detachable jaw
- 600 V ac and dc voltage measurement
- Detachable jaw makes accessing wires and viewing the display easier
- Built in flashlight/torch allows for easy illumination and identification of wires
- CAT III 600 V
- Compact design fits in your hand and can be used while wearing protective equipment
- State of the art signal processing allows for use in noisy electrical environments while providing stable readings
- Large, easy to read, backlight display automatically sets the correct measurement range so you do not need to change switch positions while taking a measurement
- Three-year warranty
- Soft carrying case
- Safety conformance IEC/EN 61010-1:2001, CAT III 600 V
- Included accessories:  
Coated instruction card  
Safety information sheet  
Soft carrying case  
TL75 test leads  
Five AA Alkaline batteries

Fluke 365	
Diameter of measurable conductor	0.71" or 18 mm max
Operating temperature	-14 to 122°F (-10 to 50°C)
Storage Temperature	-40 to 140°F (-40 to 60°C)
Operating Humidity	< 90% @ 10 to 30 °C, < 75% @ 30 to 40°C
Operating Altitude	0 to 2000 m
Size	225 x 65 x 46 mm, (8.858 x 2.559 x 1.811 in.)
Temperature Coefficient	0.01% °C (<18°C or > 28°C)
Weight	275g, (10 oz.)
Warranty	Three years

Price Each

Order Code	Product Code	1+	4+
WX53595	365	£199.00	£193.47



NEW

- This 3 1/4 digit AC Leakage Current Tester has a high resolution and a large shield transformer jaw which eliminates the influence of other current conductors and minimises the effects of external magnetic fields allowing you to perform accurate and reliable measurements in crowded electrical environments.
- Ideal for many applications including power system checks and installation.
- 25.1mm display with function indicators
- Large 30mmØ shield transformer jaw
- 5 ranges available: 40mA, 400mA, 4A, 40A & 100A
- Frequency Selector Switch to eliminate the effects of high frequency noise & harmonics when taking AC current measurements
- Bar graph display with a response time of 20 times per second for transient observation
- Max/Min and Data Hold
- Overload protection for Ohm measurements at 600V
- Manual ranging via single click action rotary switch
- Zero function
- Low Battery Indication
- Auto Power off after 30mins – can be user disabled
- Supplied with test leads, protective rubber boot, hand strap, carrying bag, manual and battery
- Calibration Certificate  
CAL-LC Traceable Calibration Certificate available  
UKAS-LC UKAS Calibration Certificate available

Function	Range	Resolution	Accuracy
			50/60Hz 40/1KHz
AC Current	40mA	10µA	±1.0%±0.5mA±4.5%±0.5mA
	400mA	100µA	±3.0%±5.0mA±3.0%±5.0mA
	4A	1mA	±4.0%±0.1A ±4.0%±0.1A
	40A	10mA	±4.0%±1.0A ±4.0%±1.0A
	80A	100mA	±2.5%±1.0A ±3.0%±1.5A
	80-100A	100mA	±5.0%±1.0A ±5.0%±1.5A

Though this meter can display up to 400A, it is not calibrated beyond 100A

AC Voltage	400V	0.1V	±1.5%±2dgt ±2.0%±4dgt
Resistance	40-400Ω	0.1Ω	±1.0%±2dgt

Continuity Test <38.0Ω (audible alarm)

Power 1 x 9V PP3 Alkaline Battery (LR-61)

Dimensions 210 x 62 x 35.6mm

Weight 200g

Price Each

Order Code	Product Code	1+	4+
WX60920	DT-9809	£76.50	£73.44

## Cable Locators

### Professional Cable Locator Kit



NEW

- This is a professional general purpose cable locator kit consisting of a transmitter and receiver to detect or trace conductors
- Ideal for many applications including tracing cables in walls/underground, locating fuses/breakers on final circuits and finding interruptions/short circuits in cables and electrical floor heating systems
- Can be used for all applications (both voltage free and live) without the use of other instruments
- Allows conductor tracing in walls and soil
- Transmitter with 2.6mm LCD display for transmitting level, transmitting code & external voltage
- Receiver with 3.7mm LCD display and Backlight for level of receiving signal, code of receiving signal & live voltage indication
- 5 ranges available: 12V, 50V, 120V, 230V & 400V (Transmitter)
- Automatic or manual adjustment of receiving signal sensitivity
- User selectable audible alarm for reception signal
- Built in Flash Light for use in dark environments (Receiver)
- Low Battery Indication
- Auto Power Off after 1hr (Transmitter) after 5mins (Receiver)
- Supplied with transmitter, receiver, crocodile clips, test leads, carrying case, manual & batteries

	Transmitter	Receiver
Voltage Range	12 - 400V	*
Frequency Range	0 - 60Hz	*
Output Signal	125kHz	*
External Voltage Detection	Max. 400V AC/DC	*
Tracing Depth (wall/underground cables)	0 - 2.5m	*
Voltage Detection	0 - 0.4m	*
Electrical Safety	EN 61010-1	*
Overvoltage Category	CAT III 300V	*
Operating Temperature	0 to 40°C	*
Storage Temperature	-20 to 60°C	*
Power	2 x 9V PP3 Alkaline*	*
Batteries (LR-61)		*
Dimensions	130 x 69 x 32mm	*
	192 x 61 x 37mm	*
Weight	130g	*
	180g	*

Price Each

Order Code	Product Code	1+	4+
WX60921	LA-1012	£225.00	£216.00

## Power Loggers/Analysers

### Fluke 430 Series II Three-Phase Power Quality and Energy Analyzers



FLUKE

NEW

#### More detailed power quality analysis capability, and a new Fluke-patented energy monetization function

The new 430 Series II Power Quality and Energy Analyzers offer the best in power quality analysis and introduce, for the first time ever, the ability to monetarily quantify energy losses. The new Fluke 434, 435 and 437 Series II models help locate, predict, prevent, and troubleshoot power quality problems in three-phase and single-phase power distribution systems. Additionally, the Fluke-patented energy loss algorithm, Unified Power Measurement, measures and quantifies energy losses due to harmonics and unbalance issues, allowing the user to pinpoint the origin of energy waste within a system.

Energy loss calculator: Classic active and reactive power measurements, unbalance and harmonic power, are quantified to pinpoint true system energy losses in dollars (other local currencies available).

- Power inverter efficiency: Simultaneously measure AC output power and DC input power for power electronics systems using optional DC clamp.
- PowerWave data capture: 435 and 437 Series II analyzers capture fast RMS data, show half-cycle and waveforms to characterize electrical system dynamics (generator start-ups, UPS switching etc.).
- Waveform capture: 435 and 437 Series II models capture 100/120 cycles (50/60Hz) of each event that is detected in all modes, without set-up.
- Automatic Transient Mode: 435 and 437 Series II analyzers capture 200 kHz waveform data on all phases simultaneously up to 6 kV.
- Fully Class-A compliant: 435 and 437 Series II analyzers conduct tests according to the stringent international IEC 61000-4-30 Class-A standard.
- Mains signaling: 435 and 437 Series II analyzers measure interference from ripple control signals at specific frequencies.
- 400 Hz measurement: 437 Series II analyzer captures power quality measurements for avionic and military power systems.
- Troubleshoot real-time: Analyze the trends using the cursors and zoom tools.
- Highest safety rating in the industry: 600 V CAT IV/1000 V CAT III rated for use at the service entrance.
- Measure all three phases and neutral: With included four flexible current probes with enhanced thin flex designed to fit into the tightest places.
- Automatic Trending: Every measurement is always automatically recorded, without any set-up.
- System-Monitor: Ten power quality parameters on one screen according to EN50160 power quality standard.
- Logger function: Configure for any test condition with memory for up to 600 parameters at user defined intervals.
- View graphs and generate reports: With included analysis software.
- Battery life: Seven hours operating time per charge on Li-ion battery pack.

#### Unified Power Measurement

Fluke's patented Unified Power Measurement system (UPM) provides the most comprehensive view of power available, measuring:

- Parameters of Classical Power (Steinmetz 1897) and IEEE 1459-2000 Power
- Detailed Loss Analysis
- Unbalance Analysis

These UPM calculations are used to quantify the fiscal cost of energy loss caused by power quality issues. The calculations are computed, along with other facility-specific information, by an Energy Loss Calculator that ultimately determines how much money a facility loses due to wasted energy.

#### Energy savings

Traditionally energy savings are achieved by monitoring and targeting, or in other words, by finding the major loads in a facility and optimizing their operation. The cost of power quality could only be quantified in terms of downtime caused by lost production and damage to electrical equipment. The Unified Power Measurement (UPM) method now goes beyond this to achieve energy savings by discovering the energy waste caused by power quality issues. Using the Unified Power Measurement, Fluke's Energy Loss Calculator (see screen shot below) will determine how much money a facility is losing due to waste energy

#### Unbalance

UPM gives a more comprehensive breakdown of the energy consumed in the plant. In addition to measuring reactive power (caused by poor power factor), UPM also measures the energy waste caused by unbalance; the effect of unevenly loading each phase in three-phase systems. Unbalance can often be corrected by reconnecting loads on different phases to ensure the current drawn on each phase is as equal as possible. Unbalance can also be corrected by installing an unbalance reactance device (or filter), that will minimize the effects. Correcting unbalance should be basic good housekeeping in the facility as unbalance problems can cause motor failure or shorten equipment life expectancy. Unbalance also wastes energy. Using UPM can minimize or eliminate that energy waste, thus saving money.

#### Harmonics

UPM also provides details of the energy wasted in your facility due to the presence of harmonics. Harmonics may be present in your facility due to the loads you operate or may be caused by loads in adjacent facilities. The presence of harmonics in your facility can lead to:

- overheating transformers and conductors
- nuisance tripping of circuit breakers
- early failures of electrical equipment

Quantifying the cost of wasted energy due to the presence of harmonics simplifies the return-on-investment calculation needed to justify purchasing harmonic filters. By installing a harmonic filter the ill effects of harmonics can be reduced and energy waste eliminated, resulting in lower operational costs and more reliable operation.

Please contact local Brammer Branch or your Field Sales Representative for more details.

Price Each

Order Code	Product Code	1+
WX60922 ‡	434II	POA
WX60923 ‡	435II	POA
WX60924 ‡	437II	POA

‡ Special delivery applies. Please ask for details

**On site technical support and advice available**





### FLUKE

The Fluke 1735 Power Logger is the ideal electrician or technician's tool for conducting energy studies and basic power quality logging. Set the 1735 up in seconds with the included flexible current probes and color display. The 1735 logs most electrical power parameters, harmonics and captures voltage events.

- Record power and associated parameters for up to 45 days
- Monitor maximum power demand over user-defined averaging periods
- Prove the benefit of efficiency improvements with energy consumption tests
- Measure harmonic distortion caused by electronic loads
- Improve reliability by capturing voltage dips and swells from load switching
- Easily confirm instrument setup with color display of waveforms and trends
- Measure all three phases and neutral with included 4 flexible current probes
- View graphs and generate reports with included Power Log software
- Compact, rugged design with IP65 case, 600 V CAT III and 2-year warranty
- Included with the 1735
  - Soft carrying case
  - 4 flexible current probes (15 A/150 A/3000 A)
  - Power Log software
  - Voltage leads and clips
  - Color localization set
  - PC interface cable
  - Universal AC adapter
  - Printed English manual
  - Multi-language manual CD

#### Features

Oscilloscope mode  
Two modes: Six channels simultaneously - three voltages and three currents  
Two channels voltage and current on a single phase

#### Harmonics

Voltage and current harmonics to the 40th as a bar graph  
Detailed information for each harmonic  
Total harmonic distortion (V and I)  
Harmonics recording 1 second to 900 s (minimum, maximum and average values)

#### Power and Energy

Measurements of:  
Active power (W), apparent power (VA), reactive power (VAR), distortion power (D)  
Power factor and cos  $\phi$   
Active and reactive energy  
Recording averages 1 second to 900 s (minimum, maximum and average values)

#### Events

Detections of voltage dips, swells and interruptions  
Triggering based on half-cycle RMS values

#### Memory

Store up to 50 screenshots  
Recordings stored as a six screen summary for immediate viewing  
Recording consist of up to 1440 intervals  
Measured values are down loaded via RS-232 port with PQLogView software

#### Price Each

Order Code	Product Code	1+
WX53596	1735	£2,258.00

## Electrical Technician Kit

### Electrical Kit



- The ideal kit to meet plant maintenance, HVAC or electrical technician's needs
- Contents include:
  - Non-contact IR Thermometer allows quick surface temperature measurement
  - EX430 True RMS MultiMeter
  - MA200 400A Clamp Meter
  - 42510 IR Thermometer
  - 40130 Non-Contact Voltage Detector
- Supplied in an attractive hard carrying case

#### Price Each

Order Code	Product Code	1+	5+
WX43947	TK430-IR	£200.00	£190.60

## PAT Testers

### Fluke 6500



### FLUKE

The Fluke 6500 PAT tester verifies the electrical safety and operation of portable appliances in accordance with relevant guidelines and regulations. With powerful auto test capabilities and with simplified controls, increases the number of tests you can perform per day without compromising results. Performs the tests required for class I and class II appliances.

- Fluke simplifies portable appliance testing
- Compact and lightweight
- Efficient to work with and easy to carry around and has extra space in the hard case for accessories
- One touch simplicity
- Pre-set and user-definable test routines are initiated from a single button – to speed up test procedures and save you time on site
- A better way of working
- Rapid data entry is via a QWERTY keyboard (or optional Fluke barcode scanner) and fast data transfer from the main memory or the Compact Flash memory card

#### Price Each

Order Code	Product Code	1+	4+
WX41987	6500	£1,185.00	£1,146.77



NEW

- Lightweight hand-held battery powered PAT tester for use where there is no convenient power socket
- It's easy to use and reliable, with a simple one button, one test sequence selection, displays measured values as well as a "pass" or "fail" decision and comes complete with a mains charger
- Tests both 240V & 110V appliances
- User functions include:
  - Class I, Class II and power lead tests
  - Insulation Test at 500V
  - 200mA DC continuity test, with two pass levels
  - Displays measured values and PASS or FAIL result
- Dimensions: 90 x 210 x 54mm
- Weight: Approx 700g (including batteries and leads)
- Includes: carry case, manual, rechargeable batteries, mains charger, mains lead, IEC lead, earth bond probe (TL67)

#### Price Each

Order Code	Product Code	1+	3+
WX60925	HPAT500	£409.00	£392.64



**Personal protection equipment, see our Personal Protection Equipment section**



## HPAT600 Handheld Portable Appliance Tester



MARTINDALE  
ELECTRIC

NEW

- Lightweight hand-held battery powered PAT tester
- The HPAT600 is crammed with features such as dual insulation test voltages, user selectable pass levels, easy or fast operating mode, IEC lead test and test data storage for up to 200 appliances - equivalent to a whole day's testing. This data can be scrolled through to verify testing has been correctly done, but cannot be downloaded
- The HPAT600 can be operated in easy (manual) or fast (automatic) mode. In manual mode, aimed at the newcomer to PAT testing, a connection diagram for the selected test type is shown on the display and each step of a test requires user confirmation by a press of the OK button. In automatic mode, the HPAT600 will routinely run through a selected test sequence, needing only one button press, without any further user interaction unless a failure is encountered.
- Speeds up PAT testing
- Simple one button, one test sequence selection
- Select your own pass levels to increase flexibility
- Displays measured values and PASS or FAIL result
- Supplied with both mains and car chargers
- 250V / 500V Insulation Test (250V option for filtered PSUs & sensitive IT equipment)
- Complies with the new IEE Code of Practice
- 200mA Earth Bond Test - IT Safe
- Tests both 240V & 110V appliances
- Memory: 200 tests can be stored
- Overload protection: 300V AC/DC
- Protection Class: IP20
- Safety: Complies to BS EN 61010
- Temperature Range: -10 to 40°C, noncondensing
- Power supply: 6 x 1.2V AA NiMH rechargeable batteries 1800mAh or greater
- Dimensions: 90 x 210 x 54mm
- Weight: Approx 700g (including batteries and leads)
- Includes: carry case, manual, rechargeable batteries, mains charger, mains lead, IEC lead, earth bond probe (TL67), in-car charger, earth null adaptor

200mA Earth Bond Test - IT Safe

Price Each

Order Code	Product Code	1+	3+
WX60926	HPAT600	£499.00	£479.04

## PATREG Portable Appliance Register



NEW

MARTINDALE  
ELECTRIC

- This handy A5 register allows you to keep manual records of PAT testing results to ensure your system is fully compliant

Price Each

Order Code	Product Code	1+	3+
WX60927	PATREG	£9.18	£8.81

## HPAT500KIT1 Basic PAT Tester Kit



MARTINDALE  
ELECTRIC

NEW

- This value for money kit provides all you need for basic PAT testing with pass and fail labels, record book to record results and two additional handy tools, a socket tester and non-contact voltage detector
- Lightweight hand-held battery powered PAT tester
- Simple one button, one test sequence selection
- Displays measured values & PASS or FAIL decision
- 200mA Earth Bond Test - IT Safe
- Tests both 240V & 110V appliances
- Kit Includes: HPAT500 tester, CP501 Check Plug, VT2 Voltage Indicator, Pass labels (500), Fail labels (100), PAT register booklet, Batteries, 230V Extension lead adaptor (EX332), Mains charger (PSUHPAT230)

Price Each

Order Code	Product Code	1+	3+
WX60928	HPAT500KIT1	£489.00	£469.44

## HPAT600KIT1 Advanced PAT Tester Kit



MARTINDALE  
ELECTRIC

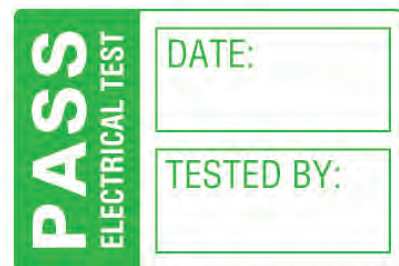
NEW

- This advanced PAT testing kit includes the HPAT600 as well as pass and fails labels and a record book
- Lightweight hand-held battery powered PAT tester
- Simple one button, one test sequence selection
- Displays measured values & PASS or FAIL decision
- 200mA Earth Bond Test - IT Safe
- User adjustable pass limits
- 250V / 500V Insulation Test
- Tests both 240V & 110V appliances
- It also includes a socket tester and a non-contact voltage indicator.
- Kit Includes: HPAT600 tester, CP501 Check Plug, VT2 Voltage Indicator, Pass labels (500), Fail labels (100), PAT register booklet, Batteries, 230V Extension lead adaptor (EX332), Mains charger (PSUHPAT230), Null pin on key fob (TL178)

Price Each

Order Code	Product Code	1+	3+
WX60929	HPAT600KIT1	£589.00	£565.44

## LAB1 PAT Testing Pass Labels



MARTINDALE  
ELECTRIC

NEW

- Roll of 500 small PASS labels (30 x 20mm)
- Suitable for plug tops and small appliances

Price Per Roll 500

Order Code	Product Code	1+	3+
WX60930	LAB1	£13.67	£13.12

## FAIL1 PAT Testing Fail Labels



MARTINDALE  
ELECTRIC

NEW

- The fail labels are essential to prevent re-use of unsafe equipment which has failed a PAT test. Available in rolls of 100 (60 x 30mm)

Price Per Roll 100

Order Code	Product Code	1+	3+
WX60931	FAIL1	£5.47	£5.25

## Electrical Test Equipment

### Fluke 1507 and 1503 Insulation Testers



- The Fluke 1507 and 1503 Insulation Testers are compact, rugged, reliable, and easy to use
- With their multiple test voltages, they are ideal for many troubleshooting, commissioning, and preventative maintenance applications
- Additional features on the tools save both time and money when performing tests
- They offer great performance for an exceptional value!
- Insulation test range: (1507: 0.01MΩ to 10GΩ), (1503: 0.1MΩ to 2000MΩ)
- Insulation test voltages: (1507: 50V, 100V, 250V, 500V, 1000V), (1503: 500V, 1000V) for many applications
- Automatic calculation of Polarization Index and Dielectric Absorption Ratio saves both time and money (1507 only)
- Compare (Pass/Fail) function makes repetitive tests simple and easy (1507 only)
- Remote test probe makes repetitive or hard-to-reach testing easier
- Live circuit detection prevents insulation test if voltage >30V is detected for added user protection
- Auto-discharge of capacitive voltage for added user protection
- AC/DC voltage: 0.1V to 600V
- 200mA Continuity
- Resistance : 0.01Ω to 20.00KΩ
- Auto power off to save battery power
- Large, backlit display for easy readability
- CAT III - 1000V, CAT IV - 600V over voltage category rating for added user protection
- Included accessories: Remote probe, test leads and probes, alligator clips

(Image shown is the 1507 model)

		Price Each	
Order Code	Product Code	1+	4+
WX38629	1507	£380.00	£367.74
WX38628	1503	£278.00	£269.03

### Insulation Resistance Testers 1555/1550C



FLUKE

Digital insulation testing up to 10kV

The new 1555 and redesigned Fluke 1550C insulation resistance testers, offer users digital insulation testing up to 10kV for testing a wide range of high voltage equipment including switchgear, motors, generators and cables.

With these new insulation testers, customers can now conduct the entire range of test voltages specified in IEEE 43-2000 with a best in class, 3 year warranty and CAT IV 600 V safety rating. With measurement storage and PC interface, the 1555 and 1550C are perfect tools for preventive or predictive maintenance programs designed to identify potential equipment failures before they occur.

- Features and Benefits:
- Test voltages up to 10 kV provides solutions for all applications
- CAT III 1000 V, CAT IV 600 V safety rating
- Voltage breakdown detection alerts the user that voltage is present and gives the voltage reading up to 600 V ac or dc for increased user safety
- Selectable test voltages in 50 V steps from 250 to 1000 V, and 100 V steps above 1000 V
- Measurements can be stored in up to 99 memory locations, with each location assigned a unique, user defined, label for easy recall
- Long battery life gives the user over 500 tests between charges for the 1555 and 1000 tests for the 1550C
- Automatic calculation of Dielectric Absorption (DAR) and Polarization Index (PI) with no additional setup
- Guard system eliminates the effect of surface leakage current on high-resistance measurements
- Large digital/analog LCD for easy viewing
- Capacitance and leakage current measurement
- Ramp function for breakdown testing
- Resistance measurements up to 2TΩ
- Timer settings up to 99 minutes for timed tests
- 3-year warranty
- Included with the Unit
- Test cables with alligator clips (red, black, green)
- Infrared adapter with interface cable
- FlukeView Forms basic CD-ROM
- AC power cord
- Soft carrying case
- Users manual on CD-ROM
- Quick Reference card
- English manual
- USB-IR cable installation guide
- FlukeView Forms installation guide
- Kit includes: IP67 hard case instead of soft case, heavy duty alligator clips and certificate of calibration

		Price Each
Order Code	Product Code	1+
WX53597	FLUKE-1555	£2,883.00
WX53598	FLUKE-1550C	£2,394.00

### Multi Function Testers 1652 & 1653



- Learn in minutes, test in seconds
- Highly portable easy to use Multi-function Testers providing the primary electrical test functions as required by BS7671 (IEE wiring regulations)
- Both models feature the following measurement functions:
- Voltage & frequency, wiring polarity, insulation resistance, continuity, loop and line resistance, PFC/PSC short circuit current, RCD tripping time and current, Auto RCD test sequence, test DC sensitive RCD's
- The 1653 also includes phase sequence indicator, earth test and data download.
- Easy operation - Simple user interface via rotary knob
- Measures loop impedance without tripping RCD's
- Slim test probe incorporating test button
- Rugged - withstands 1 metre drop test, compact and lightweight

		Price Each	
Order Code	Product Code	1+	4+
WX30973 ‡	1652C	£947.00	£916.45
WX30974 ‡	1653B	£1,159.00	£1,121.61

‡ Special delivery applies. Please call for details

### CAT IV Insulation Tester/DMM with Wireless PC Interface



- Wireless USB interface transmits measurement data to a PC
- Backlit super large triple display
- 125V, 250V, 500V, and 1000V test voltages
- Insulation Resistance from 0.001MΩ to 4000MΩ
- Auto discharge of capacitive voltage
- Lock Power On Function for hands-free operation
- Data Hold, Min/Max, Relative mode, Auto power off
- Complete with USB receiver, Windows® software, test leads & alligator clips, bead wire temperature probe, carrying case and batteries

		Price Each	
Order Code	Product Code	1+	5+
WX60932	MG302	£273.00	£259.92

## Voltage & Continuity Testers

### Fluke Two-Pole Tester



FLUKE

NEW



VOLTAGE/CONTINUITY TESTER WITH LCD, OHMS, SWITCHABLE LOAD - Fluke's new two-pole testers are built with you in mind. They give you the best combination of safety, ease-of-use and fast answers available anywhere.

Specifications	T90	T110	T130	T150
Voltage ac/dc	12 V to 690 V	12 V to 690 V	6 V to 690 V	6 V to 690 V
Continuity	-	0 to 400 k $\Omega$	0 to 400 k $\Omega$	0 to 400 k $\Omega$
Frequency	-	0/40 to 400 Hz	0/40 to 400 Hz	0/40 to 400 Hz
Phase rotation	-	100 V to 690 V	100 V to 690 V	100 V to 690 V
Resistance measurement	-	-	-	Up to 1999 $\Omega$
Response time (< 0.5 s LED indicator)	-	< 0.5 s	< 0.5 s	< 0.5 s
200 k input impedance	Current draw 3.5 mA @ 690V, Current draw 1.15 mA @ 230V	Current draw 3.5 mA @ 690V, Current draw 1.15 mA @ 230V	Current draw 3.5 mA @ 690V, Current draw 1.15 mA @ 230V	Current draw 3.5 mA @ 690V, Current draw 1.15 mA @ 230V
7 k input impedance (With load buttons pressed)	-	Current draw 30 mA @ 230V	Current draw 30 mA @ 230V	Current draw 30 mA @ 230V
Safety rating	CAT II 690V CAT III 690V	CAT III 690V CAT IV 600V	CAT III 690V CAT IV 600V	CAT III 690V CAT IV 600V
IP rating	IP54	IP64	IP64	IP64

Price Each

Order Code	Product Code	1+
WX60933	T90	£30.00
WX60934	T110	£56.00
WX60935	T130	£89.00
WX60936	T150	£109.00

FLUKE



- Select volts, Ohms, or current and the tester does the rest
- Check voltage, continuity and current with one compact tool
- Two models 600V and 1000V
- T5 Voltage, continuity & current testers featuring open jaw current measurement
- AC current measurement to 100A
- Resistance measurement to 1000 Ohms
- Safety CAT III 600V(T5-600) and CAT III-1000V(T5-1000)
- Two year warranty
- Model shown is the T5-1000

Price Each

Order Code	Product Code	1+	4+
WX30982	T5-1000	£134.00	£129.68
WX30983	T5-600	£124.00	£120.00

### GT55e 690V AC/DC LED Voltage Indicator



- LED display of AC and DC voltages
- Bipolar rotary field testing
- Unipolar phase testing, visual and audible output
- Continuity check, visual and audible output
- Diode test
- Polarity display, loud bleeper
- Measuring point illumination for poor lighting conditions
- IP64 splashproof and dust tight
- Limited lifetime warranty
- Voltage range: AC/DC 6 - 690V
- Frequency response: 0 - 65Hz
- Measurement Category: CAT III - 1000V, CAT IV - 600V

Price Each

Order Code	Product Code	1+	5+
WX45624	52049408 GT-55NE	£63.85	£61.94

### GT85e 690V AC/DC LCD Voltage Indicator



- Display of AC and DC voltages
- True resistance measurement
- LCD display with backlight
- Bipolar rotary field testing

- Unipolar phase testing
- Visual and audible output
- Continuity check, visual and audible output
- Diode test
- Polarity display
- Loud bleeper
- Measuring point illumination for poor lighting conditions
- IP64 splashproof and dust tight
- Limited lifetime warranty
- Voltage range: AC/DC 6 - 690V
- Resistance range: 0 - 2000  $\Omega$
- Frequency response: 0 - 65Hz
- Measurement Category: CAT III - 1000V, CAT IV

Price Each

Order Code	Product Code	Description	1+	5+
WX45625	52049407	GT-85NE	£110.05	£106.76

### VI13700/2 Fused Safety Voltage Indicator



NEW

- Before doing any electrical work it is essential to be absolutely certain the circuit is dead
- This GS38 compliant voltage indicator rapidly and safely checks for AC and DC voltages in four stages from 50V to 600V
- The bright, LED indicators give clear and immediate display of the voltage level range and polarity indication
- The tough, moulded case construction combined with heavy duty, double insulated leads which terminate in a lockable and retractable prod sheath and a substantial finger guard, make this a very reliable and safe instrument
- The return lead incorporates an HRC fuse which, together with the retractable test prods, ensures that the unit fully meets all the GS38, M15/4, HSE and EN61010 recommendations.
- Voltage Ranges:
  - AC 0 - 49V none lit
  - 50 - 99V one lit
  - 100 - 199V two lit
  - 200 - 399V three lit
  - 400V+ all lit
  - DC 0 - 74V none lit
  - 75 - 149V one lit
  - 150 - 239V two lit
  - 240 - 559V three lit
  - 560V+ all lit
- Operating temperature: -20°C to 50°C
- Overvoltage: CAT III/600V
- IMPORTANT: Voltage indicators should always be tested with a proving unit or known live source before and after use.

Price Each

Order Code	Product Code	1+	3+
WX60937	VI13700/2	£45.75	£43.92

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Test & Measurement

### Fuke T5 Voltage and Continuity Tester





## Voltage Tester



**Megger.**

- The Megger TPT210 voltage tester provides electricians and electrical engineers with voltage indication but has additional functions that make the instrument truly versatile
- AC and DC voltage from 6 to 1000 V
- Continuity up to 500 K $\Omega$  (acoustically / optically)
- RCD function test
- Two pole phase sequence indication
- LED display
- CAT IV 1000 V rating
- Display optical 13 LEDs
- Operating panel RCD button, ON/OFF button, D-Hold button
- Voltage 6 - 1000 V AC / DC
- Continuity 0 - 500 K $\Omega$
- Phase indication > 100 V AC
- Switchable load Is ~ 30 mA ED (DT) = 30 sec.
- Operating frequency 0 - 400 Hz
- Torch Ultra bright LED
- Power Supply 2 x 1.5 V batteries type AAA LR03

Price Each

Order Code	Product Code	1+	5+
WX53605	MEGGER-TPT210	£52.84	£51.19

## Voltage Tester



**Megger.**

- The Megger TPT220 voltage tester provides electricians and electrical engineers with voltage indication but has additional functions that make the instrument truly versatile
- The TPT220 features an LCD display that provides AC and DC voltage measurement from 6 to 1000 volts, in addition, a continuity / resistance function ranging from 0 to 2 K $\Omega$
- Continuity and voltage measurements greater than 35 V are accompanied by an acoustic sounder
- Although this tester is primarily for testing in electrical installations the unit can be useful for a wide number of applications. The TPT220 can be utilised for testing auto electrical, fire alarm systems and telecom
- AC and DC voltage from 6 to 1000 V
- Resistance / Continuity (acoustically)
- RCD function test
- Two pole phase sequence indication
- LCD display
- CAT IV 1000 V rating
- Display Optical 3 1/2 digit, LCD
- Operating panel RCD button, ON/OFF button, D-Hold button
- Voltage 6 - 1000 V AC / DC 1 V resolution
- Resistance 0 - 2000  $\Omega$
- Continuity 0 - 150  $\Omega$  with acoustical signal
- Phase indication > 100 V AC
- Switchable load Is ~ 30 mA ED (DT) = 30 sec.
- Operating frequency 0 - 400 Hz
- Torch Ultra bright LED
- Power Supply 2 x 1.5 V batteries type AAA LR03

Price Each

Order Code	Product Code	1+	5+
WX53606	MEGGER-TPT220	£85.35	£82.69

## Proving Unit



**Megger.**

- The Megger MPU690 proving unit provides an alternative portable battery operated voltage source that can verify the correct functioning of a voltage tester.
- The device safely generates a range of voltages from 50 to 690 volts in five steps. At switch on, the unit initially generates 690 volts then after a short period, slowly ramps down through each voltage step until the device switches off.
- The individual voltage steps are indicated by an LED with a power indicator LED that also indicates an exhausted battery.
- The MPU690 features automatic power on when voltage tester probes are inserted into the output terminals, generating a 50 Hz output voltage which simulates the AC mains supply.
- 5 stepped nominal output voltages
- Automatic operation
- High output power suitable for test lamps
- Extended battery life
- Magnetic base
- Rugged case
- Output voltage 50 - 690 volts in five stages: 50 V, 100 V, 230 V, 400, 690 V
- Power output 10 W max.
- Power On / Off Automatic on when probes are inserted into output terminals / auto off
- Indicators 5 LEDs for output voltages plus power LED
- Power supply 6 x AA / LR06 alkaline batteries

Price Each

Order Code	Product Code	1+	5+
WX53607	MPU690	£100.60	£97.45

## PD240 Proving Unit



**MARTINDALE**  
ELECTRIC

**NEW**

- The PD240 is a convenient pocket-sized, battery powered proving unit that produces a 240VDC output
- Any device used for voltage detection and for proving dead should be tested before and after use to ensure the safety of the operative
- The PD240 is currently limited to 2mA and is suitable for use with multimeters and other voltage detectors that have an input impedance greater than 120K $\Omega$ .
- It has a long battery life and comes complete with a belt clip.
- Output Voltage: 240V DC
- Output Current: 2mA max across 120K $\Omega$ , 3.5mA max Short circuit protected
- Battery: 6LR6/MN1604/PP3 (included) Shut-off below 5V
- Body: Flame retardant ABS
- Dimensions: 144 x 63 x 31mm
- Weight: 180g including battery

Price Each

Order Code	Product Code	1+	3+
WX60938	PD240	£57.50	£55.20

## PD440 Proving Unit



**MARTINDALE**  
ELECTRIC

**NEW**

- The proving unit produces 440V AC to enable voltage indicators to be fully checked
- This unit is designed for indicators with 230V (single phase) and 415/440V AC (3 phase) detection ranges, such as the Martindale V113700/2
- The PD440 can also check Drummond and other filament test lamps as its output is sufficient to illuminate the bulbs
- The proving unit is one of the few designs to check indicators with ranges above 250V.
- Output Voltage: 230V into a 5k $\Omega$  load 440V into a 700k $\Omega$  load
- Output Loading: > 4k $\Omega$
- Operating Temperature: -10 to 40°C at max. 70% RH
- Batteries: 6 x LR6 (MN1500) 1.5V Alkaline batteries or equivalent (included)
- Dimensions: 143 x 84 x 50mm
- Weight: 270g approx (excl batteries)

Price Each

Order Code	Product Code	1+	3+
WX60939	PD440	£81.52	£78.26

## PD690 Proving Unit



**MARTINDALE**  
ELECTRIC

**NEW**

- The Martindale PD690 is a 700V AC proving device, designed to enable voltage indicators to be fully checked, in compliance with Health & Safety recommendations
- Using a voltage indicator without first proving it is working correctly could prove fatal
- This device is designed for indicators with 230V and 415/440V AC detection ranges, such as the Martindale V113700
- The proving unit is one of the few designs to check indicators with ranges above 250V
- The PD690 can also check Drummond and other filament test lamps as its output is sufficient to illuminate the bulb
- This model is not designed for use with multimeters
- Output Voltage: 700V nominal
- Operating Temperature -10°C to +40°C at max 70% RH Battery
- 6 x LR6 / MN1500 1.5V alkaline batteries or equivalent
- Dimensions: 143 x 84 x 50mm
- Weight 400g approx including battery

Price Each

Order Code	Product Code	1+	3+
WX60940	PD690	£89.00	£85.44

## 230V Volt Stick



- Lightweight, compact and highly visible
- Used to safely check the presence of an AC voltage without disconnection of equipment
- No current flow needed for correct operation
- High powered LED indicator
- Requires 2 AAA alkaline batteries
- Very accurate as optimised for 230V AC
- Approved to IEC 61010-1 & CATIII 1000vAC
- Sensitivity functions @ 4mm distance from 2.5mm<sup>2</sup> conductor carrying 220v AC

Price Each

Order Code	Product Code		1+	5+
WX30361	VOLTSTICK-230V	Yellow	£15.40	£14.90
WX60941	VOLTSTICK-230B	Black	£15.40	£14.90

## 110V Volt Stick



- Volt Stick 110 – Voltage Indicator – an instant tester for safely checking the presence of a 110v AC voltage
- This high sensitivity version of the Volt Stick provides instant, non-contact checking for the presence of AC voltage down to 110v, without making any disconnections in cables, wall sockets, fuses, circuit breakers, junction boxes etc.
- This 110v version is ideal for construction site temporary supplies and, of course, for usein mains testing in the USA.
- APPLICATIONS:
  - Voltage indicator with safety handguard to avoid unintentional contact with live conductors
  - Insulated for safe use
  - Fully approved to IEC 61010-1, CATIII 1000vAC and CE
- Voltage Range: 110 ~ 1000v AC
- Sensitivity: Indicator will illuminate at 4mm distance of a 2.5mm conductor carrying 110v
- Response Time: Immediate
- Intrinsically Safe: Yes
- Power Requirements: 2 x Standard AAA alkaline batteries (supplied)
- Relative Humidity: 80% @ 30°C, 50% @ 40°C
- Operating Temperature: -20 ~ +50°C
- Overvoltage: CAT III 1000v AC
- Dimensions: 145(L) x 18(Ø) mm
- Weight: 35g (including batteries)

Price Each

Order Code	Product Code		1+	5+
WX60942	VOLTSTICK-110V	Black	£15.40	£14.90

## Circuit Breaker with AC Wire Tracer



## AMPROBE

- Three testers in one
- Identify circuit breaker to electrical socket
- Trace AC cables in walls
- Sort AC wires in a bundle
- Coded transmission for separation of transmitter signal
- Audible and visual indicators
- Includes sensitivity adjustment for precise tracing and location
- Cable tracing length to 150m nominal
- Cable tracing depth to 38cm
- Two versions: "E" with UK plug and "FGIS" with Euro (shuko) plug
- CAT III 300V rated

Price Each

Order Code	Product Code		1+	5+
WX38660	ECB50A-E		£62.00	£60.00

## GT-16 Adjustable Non-Contact Voltage Detector



- With both a visual and audible signal, the GT-16 can be used for detecting voltage in outlets, lighting fixtures, thermostats, and circuit breakers
- Additionally, the GT-16 is useful for locating breaks in wires and cables
- Changing the GT-16 product sensitivity is as easy as using the thumb dial control on the housing
- Fast, easy, non-contact voltage detection
- Voltage Detection AC 5 – 1000 V
- Frequency 50 – 100 Hz
- Bright LED and audible alarm if voltage is present
- ON/OFF switch for longer battery life
- Comfort grip to ease fatigue
- Convenient pen size fits into pocket or tool pouch
- Easy to replace batteries
- Measurement category CAT IV, 1000 V
- Lifetime limited Warranty
- U.S. Patent D500.799

Price Each

Order Code	Product Code	Description	1+	5+
WX45626	52033580	GT-16	£23.28	£22.58

## Volt Stick EX230 &amp; EX110 ATEXApproved



- Locates breaks in cables
- The red indicator in the tip will illuminate on detection of AC voltage simply by applying the tip close to any connection point, or moving it along any insulated cable
- Detects blown fuses inside plugs or fuse holders
- Distinguishes between live and neutral wires in both single and three-phase supplies
- Identifies voltage-carrying cables in junction boxes
- Identifies faulty in-line switches
- Locates defective in-series light bulbs
- Intrinsically safe: EEX IBICT4
- Nemko 03ATEX1456
- Nemko 0470
- IECEx NEM07.0001
- Voltage range: 230 ~ 1000v AC for 230V Version
- Voltage range: 110 ~ 1000v AC for 230V Version
- Indicator will illuminate at 4mm distance of a 2.5mm conductor carrying 230v or 110v
- 2 x Standard AAA alkaline batteries (supplied)
- CAT III 1000v AC
- Operating temperature: -20 ~ +50° C for 230V version
- Operating temperature: -20 ~ +40° C for 110V version
- 110V Version has a flat tip

Price Each

Order Code	Product Code		1+	5+
WX53565	VOLTSTICK-EX230	EX rated 230V	£26.63	£25.77
WX60943	VOLTSTICK-EX110	EX rated 110V	£26.63	£25.77

## Magnetic Stick



- Powerful red light in the tip to indicate presence of a magnetic field
- Easy to use
- The test lamp responds to all kinds of magnetic fields, from alternating current to direct current and permanent magnets
- Test relays with coils and electrically controlled solenoid valves in all types of vehicles and machines
- Test solenoid valves when servicing oil burners
- ATEX approved version available upon request
- Non metallic contact method
- Useful for pneumatic and hydraulic control equipment and other areas where Solenoid Valves are used

Price Each

Order Code	Product Code		1+	8+
WX30360	MT702		£19.25	£18.63

## Magnet Stick EX – ATEX Magnetic Field Indicator



- Magnet Stick EX – ATEX Magnetic Field Indicator
- The ATEX-Approved version of the Magnet Stick for use in hazardous areas such as chemical plants, oil refineries, offshore rigs and explosive environments. (For features see standard Magnet Stick above)
- The Magnet Stick provides safe and simple checking for the presence of magnetism.
- Upon testing and without metallic contact, the lamp lights immediately where there is a magnetic field (e.g. an activated coil in a solenoid valve). Equipment can be tested without having to switch it off and magnetic coils can often be tested through their protective cover, saving hours of dismantling time. The Magnet Stick responds to all kinds of magnetic fields from alternating or direct current, to permanent magnets. A powerful red light in the tip indicates presence of a magnetic field.
- APPLICATIONS:
  - Testing operating solenoid valves in pneumatic and hydraulic control equipment
  - Testing relays with coils and electrically-controlled solenoid valves in all types of vehicles and machines
  - Testing solenoid valves when servicing oil burners
  - Fully approved to IECEx 61010-1, CATIII 1000vAC and CE
- Sensitivity: 300 Gauss, (0,3 mT) v
- Response Time: Immediate
- Batteries: 2 x 1,5v AAA (supplied)
- Relative Humidity: 80% @ 30°C, 50% @ 40°C
- Operating Temperature: -20 ~ +50°C
- Overvoltage: CAT III 1000v AC
- Dimensions: 145(L) x 18(Ø) mm
- Weight: 35g (including batteries)

Price Each

Order Code	Product Code	Description	1+	8+
WX60944	MAGNETSTICK-EX	ATEX	£30.61	£29.62

## Volt Stick Sound



cie-group



- Added 'Beeper' feature; a detection buzzer for even greater clarification
- Also ideal for 'detection round corners', in bright daylight and in awkward out of sight areas. High visibility green tube for ease of identification if dropped or hidden in the toolbox
- Locates breaks in cables; the red indicator in the tip will illuminate on detection of AC voltage simply by applying the tip close to any connection point, or moving it along any insulated cable.
- Detects blown fuses inside plugs or fuse holders
- Distinguishes between live and neutral wires in both single and three-phase supplies
- Identifies voltage-carrying cables in junction boxes
- Identifies faulty in-line switches
- Locates defective in-series light bulbs
- Voltage range 220 ~ 230v AC
- Sensitivity functions @ 4mm distance from 2.5mm<sup>2</sup> conductor carrying 220v AC
- Power requirements 2 x AAA (LR03) batteries
- Operating temperature -10° ~ +50°C
- CAT III 1000v AC

Price Each

Order Code	Product Code	1+	5+
WX53566	VOLTSTICK-SOUND	£17.33	£16.77

## Volt Stick PRO230



cie-group



- The red indicator in the tip will illuminate on detection of AC voltage simply by applying the tip close to any connection point, or moving it along any insulated cable
- The PRO230 features a unique 'shielded' fork tip for highly selective and accurate testing for presence of AC voltage in specific cables or wires
- Ideal for professional, close proximity testing and installation work
- Live cables can easily be detected in equipment cabinets, fuse boxes, etc
- Cables and connections can easily be checked in low voltage equipment too
- Extremely safe when measuring in junction boxes
- With the supplied field strength amplifier, anti-tamper, earthed outlets can be checked
- Fully insulated for safe use
- Voltage range 230v AC
- Sensitivity Functions upon contact with cable carrying 220v AC
- Power Requirements 2 x Standard AAA alkaline batteries (supplied)
- Operating Temperature -10 ~ +50°C
- CAT III 1000v AC

Price Each

Order Code	Product Code	1+	5+
WX53567	VOLTSTICK-PRO230	£28.42	£27.51

## Volt Stick PRO12 – Voltage Indicator



cie-group



NEW

- 12v Instant Voltage Tester with unique forked tip. See features above for the PRO230
- Voltage Range: 12 ~ 1000v AC
- Sensitivity: Functions upon contact with cable carrying 12v AC
- APPLICATIONS:

Unique forked tip (patented for) gives unsurpassed selectivity and reduces the risk of spurious indications  
Live cables can easily be detected in equipment cabinets, fuse boxes, etc  
Extremely safe when measuring in junction boxes  
Powerful red light in the tip to indicate voltage  
Fully insulated for safe use  
Fully approved to IEC 61010-1, CATIII 1000vAC and CE  
Includes Adaptor for larger cable testing

- Voltage Range: 12v ~ 600v AC
- Sensitivity: Functions upon contact with cable carrying 12v AC
- Response Time: Immediate
- Power Requirements: 2 x AAA (LR03) batteries (supplied)
- Relative Humidity: 80% @ 30°C, 50% @ 40°C
- Operating Temperature: -10° ~ +50°C
- Overvoltage: CAT III 1000v AC
- Dimensions: 145(L) x 18(Ø) mm
- Weight: 40g (including batteries)

Price Each

Order Code	Product Code	1+	5+
WX60945	VOLTSTICK-PRO12	£28.42	£27.51

## Volt Stick LV50 IECEx & ATEX Approved



cie-group



- The red indicator in the tip will illuminate on detection of AC voltage simply by applying the tip close to any connection point, or moving it along any insulated cable
- This high sensitivity version (testing down to 50v) is also intrinsically safe, making it an essential 'life-saver' testing tool for utilities engineers as well as for use in hazardous areas such as chemical plants, oil refineries, off shore rigs and explosive environments
- Used as a safety device to make sure metallic surfaces, pipework and cables are safe from potentially lethal voltages
- IECEx and ATEX approved voltage indicator for use in explosive environments
- Voltage indicator with safety handguard to avoid unintentional contact with live conductors
- Voltage range 50 ~ 1000v AC
- Insulated for safe use
- Intrinsically safe: EEx ib IICt4  
Nemko 03 ATEX 1456  
Nemko 0470  
IECEx NEMO7.0001
- Sensitivity indicator will illuminate at 4mm distance of a 2.5mm conductor carrying 50v
- Power Requirements 2 x Standard AAA alkaline batteries
- Operating Temp -20 ~ +40° C
- Overvoltage CAT III 1000v AC

Price Each

Order Code	Product Code	1+	5+
WX53568	VOLTSTICK-LV50	£26.95	£26.08

## VSPU1 Volt Stick Proving Unit



cie-group



- The new VSPU1 has been specifically developed to provide confident functionality testing of the Volt Stick 230v product range (Volt Stick 230V, 230B, SOUND and LV50 models)
- This self-powered Proving Unit internally generates a 220 ~ 240v electrical field when the tip of a Volt Stick is inserted into the Unit's test portal
- Where regular checking of test instrument functionality is a requirement (such as Health & Safety regulations, tools & equipment management, etc), or simply for user confidence; the Volt Stick Proving Unit is a simple, effective, built-for-purpose solution
- Sealed, battery-powered unit
- Provides easy storage for a single Volt Stick unit

Price Each

Order Code	Product Code	1+	5+
WX53569	VOLTSTICK-VSPU1	£76.04	£73.58

## VT2 Non-Contact Voltage Indicator



MARTINDALE

NEW

- The Martindale VT2 is a non-contact voltage detector for detection of AC voltages in walls, sockets, cables, circuit breakers and more
- With a detection range of 200V - 1000V, this is a handy tool for any electrician, fitting comfortably into your pocket with the aid of a clip.
- The VT2 is simple to use, and features a red light in the tip which illuminates when AC voltage is detected.
- Dimensions are 170mm in length, 19mm in diameter

Price Each

Order Code	Product Code	1+	3+
WX60946	VT2	£15.95	£15.31

## VT3 Non-Contact Voltage and Magnetic Indicator



MARTINDALE

NEW

- The VT3 is a non-contact voltage and magnetic indicator
- It can check for the presence of an AC voltage in, wall sockets, cables, circuit breakers and many other places 200 - 1000V AC
- It is safe, easy to use and comfortably fits into a pocket
- A red light in the tip illuminates when AC volts are detected
- In addition to the voltage detection capabilities of the VT2, above, a green light illuminates to show the presence of a magnetic field >10mT
- Dimensions: 170mm in length and approx 19mm in diameter

Price Each

Order Code	Product Code	1+	3+
WX60947	VT3	£24.50	£23.52

## VT12 Voltage Tester



MARTINDALE

NEW

- The VT12 is constructed in accordance with the latest safety standards (EN61243-3, EN61010) and guarantees safe and reliable measurements and testing
- This robust tester has automatic AC/DC detection up to 690V and continuity testing with optical and acoustic indication up to 200k Ohms
- It is ergonomically designed and durable enough for both industrial and domestic uses and is rated to CAT III 690V
- Voltage Range: 12 - 690V AC/DC
- LED resolution: +/-12, 24, 50, 120, 230, 400, 690V
- AC/DC Voltage Detection: automatic
- Range detection: automatic
- Probe caps for GS38 compliance
- Frequency Range: DC, 0 - 65Hz
- Continuity Test: Optical/acoustical
- Continuity Range: 0-200 kΩ
- Weight: approx. 130g
- Dimension: approx. 205 x67 x27mm

Price Each

Order Code	Product Code	1+	3+
WX60948	VT12	£34.50	£33.12



## VIPD Safety Voltage & Proving Unit



MARTINDALE  
ELECTRIC

NEW

- VI13700/2 Voltage Indicator - Industry Standard voltage indicator, Heavy duty double insulated leads, Fully GS38 compliant, Polarity Indication
- PD440V Proving Device - Designed to prove voltage indicators for use on single & 3 phase supplies
- These 2 units all come together in a unique case which allows you to leave the Proving Unit in the case and allow access via 2 holes in the clear front to insert your Voltage Indicators
- The Voltage Indicators are housed in the reverse of the case keeping both items together in one place

Price Each

Order Code	Product Code	1+	3+
WX60949	VIPD	£135.00	£129.60

## Socket Testers



FLUKE

- Range of 3 professional Socket Testers to suit every application
- Clear LED indication of wiring status
- Compact and durable, simple to use
- Audible indicator (SM200 & SM300)
- Bi-Colour LED's (SM300)
- RCD Check 30mA/300mS (SM300)
- Earth volts touch pad (SM300)

Price Each

Order Code	Product Code	1+	4+
WX32379	SM100	£18.39	£17.81
WX32380	SM200	£23.23	£22.50
WX32381	SM300	£35.81	£34.69

## Buzz-it check plug with sounder



MARTINDALE  
ELECTRIC

NEW

- The Martindale Buzz-It features an audible indication of the correct wiring status of sockets, making it ideal to use in awkward areas
- Three bright, long-life LEDs also illuminate to show the wiring is correct, therefore if there is no sound and any LEDs are unlit, you know there is a fault
- Faults are easily identified by the pattern of the lit LEDs, detects 28 faults
- With the audible indication, the Buzz-It can also be used as a basic fuse finder, when the correct fuse is pulled the buzzer stops.
- Note: Like all other standard socket testers, the Martindale CP501 will not detect common earth and neutral or earth neutral reversal
- Mains Supply: 200 - 250V (30-70Hz)
- Power Consumption: <1.5W
- Temperature Range: -10°C to 40°C, 60% RH (max)
- Earth Leakage: <5mA
- Overvoltage: CAT II, 300V
- Housing: Flame retardant ABS
- Dimensions: 65 x 65 x 47mm

Price Each

Order Code	Product Code	1+	3+
WX60950	BZ101	£18.98	£18.22

## EZ650 E-Ze Check™ Xtra Professional Kit



MARTINDALE  
ELECTRIC

NEW

- The E-Ze Check™ Pro Kit is supplied in a custom designed carry case for convenience
- It has an IEC socket with an interchangeable 3 pin adaptor and TL88 3-way fused leads with croc clips, allowing testing at light fittings, distribution boards and terminals
- The housing allows connection either to an adaptor with a mains plug or one with 3-way flying leads for use on lighting circuits or on bare wires
- Like all other indicators this unit cannot detect common earth and neutral or earth neutral reversal.
- **This unit is an indicator only and is not designed to provide readings for completing certificates.**
- Nominal supply: 230V, 50 Hz
- Earth loop impedance span: 0-1.7Ω, 1.7 to 5Ω, 5 to 10Ω, 10 to 100Ω, 100 to 200Ω, 200 to 500Ω
- Earth loop threshold accuracy: ±(10% + 0.3Ω)
- Voltage low indication: <195V
- Voltage high indication: >270V
- Open earth indication: >500Ω
- Power consumption: <1.6 W
- Overvoltage: CAT II/300 V
- Dimensions: 65 x 65 x 50mm
- Weight: 64g approx.
- Includes: mains lead (EX332 13A) & 3-way fused leads (TL88), Custom designed carry case

Price Each

Order Code	Product Code	1+	3+
WX60951	EZ650	£99.60	£95.62

## IN2101 500V Low Cost Insulation Tester



MARTINDALE  
ELECTRIC

NEW

- All units have a large backlit digital display with analogue bargraph
- The 2101 500V insulation tester is amazing value for money
- Features include continuity buzzer, backlight, auto hold
- The output test voltage is automatically displayed during testing
- This guarantees a minimum test voltage of 500V is being applied during the test
- Automatic zero adjust removes the resistance of the leads and the test button can be set to either latching, to give a permanent output or 'press to test'.
- Insulation: 0.200MΩ - 1000MΩ at 500V in 4 ranges with automatic discharge
- Accuracy: ± (3% rdgs + 5 digits)
- Continuity: Range: 0.1Ω - 40Ω Resolution: 0.01Ω
- Short circuit current: >200mA
- Accuracy: ± (3% rdgs + 5 digits)
- Buzzer: <30Ω
- Resistance: 0.1Ω - 1999kΩ
- Accuracy: ± (3% rdgs + 5 digits)
- Voltage range: 600V AC/DC
- Voltage Warning Indicator: >30V
- Accuracy: ± (3% rdgs + 5 digits)]
- Backlight, Auto Hold, Auto Zero
- Protection: IP44
- Overvoltage: 600V CAT III
- Complies with: BS EN 61557 & BS 7671 (17th Edition)
- Dimensions: 90 x 210 x 54mm
- Includes: batteries, manual, carry case & test leads (TL47)

Price Each

Order Code	Product Code	1+	3+
WX60952	IN2101	£238.50	£228.96

## IN2102 250/500/1000V Insulation Tester



**MARTINDALE**  
ELECTRIC

**NEW**

- The Martindale IN2102 is a fully specified insulation tester, with 250, 500 & 1000V test ranges, and is ideal unit for both domestic and industrial installers
- The test voltage is indicated on the large backlit LCD display, which includes an analogue arc. Other features include a continuity buzzer, auto hold and an automatic zero adjust which removes the resistance of the leads
- The test button can also be set to either latching, to give a permanent output, or 'press to test'
- The IN2102 is fully compliant with all UK and International standards, including the 17th Edition, and is supplied with unfused test leads with croc clips, batteries, instruction manual and a soft carry case
- Insulation Tests**  
250V: 4 / 40 / 400 / 1000MΩ  
500V: 4 / 40 / 400 / 4000MΩ  
1000V: 4 / 40 / 400 / 5000MΩ  
Range: 0.200MΩ - 5000MΩ  
Short Circuit Current: <1.5mA  
Automatic Discharge  
Buzzer Disable Option: Yes  
Accuracy: +/- 3% reading, + 5 digits
- Continuity**  
Range: 0.1Ω - 40Ω  
Resolution: 0.01Ω  
Short Circuit Current: >200mA  
Accuracy: +/- 3% reading, + 5 digits  
Buzzer: <30Ω  
Resistance: 0.1Ω - 1999kΩ  
Open Voltage: 3V  
Accuracy: +/- 3% reading, + 5 digits
- Voltage Tests**  
Voltage Range: 600V AC / DC  
Live Circuit Warning: >30V  
Accuracy: +/- 3% reading, + 5 digits
- User Settable Limits**  
Pass / Fail Indicators  
Polarisation Index (PI)  
Dielectric Absorption Ratio (DAR)  
Memory Storage  
LCD Backlit Display with Analog Arc  
Auto Hold & Auto Zero  
APO Disable Option  
IP44 Protection  
CAT III 600V Protection
- Dimensions 90 x 120 x 54mm**

Price Each

Order Code	Product Code	1+	3+
WX60953	IN2102	£269.50	£258.72

## IN2103 250/500/1000V Insulation & Continuity Tester with PI & DAR



**MARTINDALE**  
ELECTRIC

**NEW**

- The Martindale IN2103 is the top of the range insulation tester, and ideal for industrial use, as well as by users involved with the repair and reconditioning of motors
- Two key features of this professional tester include polarisation index (PI) and dielectric absorption ratio measurements (DAR)
- These sophisticated tests, introduced by Martindale for the first time in a handheld instrument, allow for more accurate measurement of insulation values.
- In addition the IN2103 displays the test voltage on the large backlit LCD display, features an analogue arc, continuity buzzer and continuity buzzer, auto hold and an automatic zero adjust which removes the resistance of the leads
- The test button can also be set to either latching, to give a permanent output, or 'press to test'
- The IN2103 is fully compliant with all UK and International standards, including the 17th Edition, and is supplied with unfused test leads with croc clips, batteries, instruction manual and a soft carry case.
- Insulation Tests**  
250V: 4 / 40 / 400 / 1000MΩ  
500V: 4 / 40 / 400 / 4000MΩ  
1000V: 4 / 40 / 400 / 5000MΩ  
Range: 0.200MΩ - 5000MΩ  
Short Circuit Current: <1.5mA  
Automatic Discharge  
Buzzer Disable Option: Yes  
Accuracy: +/- 3% reading, + 5 digits
- Continuity**  
Range: 0.1Ω - 40Ω  
Resolution: 0.01Ω  
Short Circuit Current: >200mA  
Accuracy: +/- 3% reading, + 5 digits  
Buzzer: <30Ω  
Resistance: 0.1Ω - 1999kΩ  
Open Voltage: 3V  
Accuracy: +/- 3% reading, + 5 digits
- Voltage Tests**  
Voltage Range: 600V AC / DC  
Live Circuit Warning: >30V  
Accuracy: +/- 3% reading, + 5 digits
- User Settable Limits**  
Pass / Fail Indicators  
Polarisation Index (PI)  
Dielectric Absorption Ratio (DAR)  
Memory Storage  
LCD Backlit Display with Analog Arc  
Auto Hold & Auto Zero  
APO Disable Option  
IP44 Protection  
CAT III 600V Protection
- Dimensions 90 x 120 x 54mm**

Price Each

Order Code	Product Code	1+	3+
WX60954	IN2103	£311.00	£298.56

**We can supply  
the entire  
range. If you  
can't see it  
here, just call  
0870 240 2100**

## LOKKIT1 Lock Off Kit



**MARTINDALE**  
ELECTRIC

**NEW**

- Electrical safety is paramount when performing 17th Edition and Part P installation testing
- Every year people suffer electric shock and burn injuries, some of which are fatal
- Implementing the correct safe isolation procedures will ensure the safety of the electrician and avoid these accidents.
- The Martindale universal lock out kit is compatible with most circuit breakers
- It is supplied with a padlock that has its own unique key, and a safety hasp that enables multiple users to lock off with space for up to 6 padlocks.
- The full 14 piece kit includes:  
1 x Padlock with unique key  
1 x Steel safety hasp, with space for up to 6 padlocks  
1 x Green mini MCB lock  
1 x Yellow mini MCB lock  
1 x Blue medium MCB lock  
1 x Large red MCB lock  
1 x Red fuse lockout breaker  
5 x Danger tags which can be overwritten  
1 x Black marker for writing on Danger tags  
1 x TC55 soft carry case

Price Each

Order Code	Product Code	1+	3+
WX60955	LOKKIT1	£64.75	£62.16

## VIPDLOK Voltage Indicator, Proving Device & Lock Out Kit



**MARTINDALE**  
ELECTRIC

**NEW**

- The complete solution for safe isolation, the Martindale VIPD Lock Out Kit contains the V113700/2 voltage indicator, PD440 proving device, along with a complete lock out kit, supplied with soft carry cases
- Nothing is more dangerous than trusting a defective voltage indicator to test for a dead circuit.
- Safe electrical work requires the use of a voltage indicator that has been proved with a proving unit before and after use.
- The Martindale VIPD contains the V113700/2 voltage indicator and the PD440 proving device, enabling you to comply with health and safety recommendations for safe working.
- The 16 piece kit contains the following items:  
1 x PD440 proving device  
1 x V113700 voltage indicator  
1 x Padlock with unique key  
1 x Steel safety hasp, with space for up to 6 padlocks  
1 x Green mini MCB lock  
1 x Yellow mini MCB lock  
1 x Blue medium MCB lock  
1 x Large red MCB lock  
1 x Red fuse lockout breaker  
5 x Danger tags which can be overwritten  
1 x Black marker for writing on Danger tags  
1 x TC55 soft carry case

Price Each

Order Code	Product Code	1+	3+
WX60956	VIPDLOK	£190.00	£182.40



## FD650 Digital Fuse Finder Kit



**MARTINDALE**  
ELECTRIC

**NEW**

- The Martindale FD650 digital fuse finder kit allows for tracing of fuses through mains sockets, light fittings and points in a circuit where there is no power socket available
- The transmitter is supplied with a mains plug and a set of two wire test leads, emitting a signal for the receiver to pick up
- The microprocessor controlled multi-level sensitivity makes identification of fuses and breakers much easier
- The Elite fuse finder also features a non-contact voltage indicator.
- The FD650 fuse finder is supplied in a hard carry case with a transmitter, mains plug, two wire test leads, receiver, batteries and instruction manual.
- Transmitter
  - Transmission Pulse Width approx 1.7µs width
  - Transmission Pulse Amplitude 20A max
  - Frequency Range 50 - 60Hz
- Temperature Range: -10°C to 40°C at max 60% RH
- Earth Leakage: Nil
- Mains Supply: 230V, 30 - 70Hz
- Power Consumption: 1W approx
- Overvoltage: CAT III 300V
- Protection Class: IP20
- Dimensions: 65 x 65 x 46mm approx
- Weight: 60g
- Receiver
  - Tracing Depth 0 - 10cm, for fuse assignment (depending on local conditions)
  - Sensitivity Control Via digital stepping
- Temperature Range: -10°C to 40°C at max 60% RH
- Protection Class: IP20
- Power Supply: 9V Battery (PP3 / MN1604) alkaline only
- Dimensions: 160 x 55 x 30mm
- Weight: 135g approx
- Units are EMC compliant

Price Each

Order Code	Product Code	1+	3+
WX60957	FD650	£114.00	£109.44

## Electrical Detector Discharge Pen



- The TKED 1 is capable of detecting sparks generated in electrical motor bearings whilst running
- Unique remote solution
- Capable of detecting electrical discharges on a time base of 10sec, 30 sec or indefinite
- No special training required as the instrument is operated with only two buttons
- LED backlit screen, allows for use in dark environments
- IP 55 can be used in most industrial environments
- Operational and storage temperature -120 to 70 deg C
- 255 x 210 x 60mm

Price Each

Order Code	Product Code	1+	4+
WX53634	TKED1	Electrical Detector	£387.45 £375.72

## TEK500 Microwave Leakage Detector Kit



**MARTINDALE**  
ELECTRIC

**NEW**

- The Martindale TEK500 is a straightforward microwave leakage detector, which gives a simple LED indication as to leakage levels and is suitable for use with both commercial and domestic microwave ovens
- The unit is designed to comply with national standards on permitted exposure levels.
- A self test feature simulates a real microwave input, in order to ensure the unit is working correctly at all times and the leakage tester will indicate at 1, 5 and 10mW/cm2, testing to BS5175.
- The test procedure for microwave ovens also includes checking that the microwave is heating correctly
- The TEK500 includes a beaker and digital thermometer in order for these tests to be carried out and to ensure your compliance with the testing requirements.
- The Martindale TEK500 microwave leakage detector kit is supplied with the leakage detector, beaker, digital thermometer, carry case & instruction manual. The manual also includes the calculations to apply when measuring the microwave output.
- Detection Frequency Range: 2450MHz +/-25MHz
- Sensor Distance: Fixed cone on rear of unit should be in gentle contact for standard 50mm separation
- Indicators Test Position: All four LEDs should light and an audible tone will be emitted
- On Position
  - PASS: Green "sys" LED only (<1mW per cm2)
  - Green "sys" LED & yellow "1mW" LED (<5mW per cm2)
- FAIL: Red "5mW" LED (>5mW per cm2, audible tone)
- Red "10mW" LED (>10mW per cm2, audible tone)
- Supply: 9V alkaline battery, PP3 / MN1604 or equivalent
- Dimensions: 150 x 64 x 30mm
- Weight: 170g approx

Price Each

Order Code	Product Code	1+	3+
WX60958	TEK500	£154.96	£148.76

## Phase Rotation & Motor Indicators

### Phase Rotation Indicator



**FLUKE**



- The Fluke 9040 is effective for measuring phase rotation in all areas where three phase supplies are used to feed motors, drives and electrical systems
- The Fluke 9040 is a rotary field indicator and can provide clear indication of the 3 phase via an LCD display and the phase rotation direction to determine correct connections

- It allows rapid determination of phase sequence and has a voltage (up to 700V) and frequency range suitable for commercial and industrial applications
- Test probes supplied with the instrument have a variable
- Size (HxWxD) : 124 x 61 x 27 mm
- Features:
  - 3 phase indication via LCD
  - Indication of phase rotation
  - Clear LCD display
  - No battery required (Power supply 9040: from unit under test)
- Included accessories:
  - Alligator clips - black (3)
  - Flexible test probes - black (3)

Price Each

Order Code	Product Code	1+	4+
WX38642	9040	£169.00	£163.55

### Motor Rotation Indicator



**FLUKE**

- The unique Fluke 9062 provides rotary field and motor rotation indication with the benefits of contact-less detection
- Purpose made for commercial and industrial environments, the Fluke 9062 provides rapid indication of 3 phase rotation using test leads supplied or can be used to determine motor rotation on synchronous and asynchronous 3 phase motors
- The contact-less detection is ideal for use on motors where the shaft is not visible
- Test probes supplied with the instrument have a variable clamping range for safe contact, especially in industrial sockets
- Size (HxWxD) : 124mmx61mmx27mm
- Features:
  - 3 phase indication via LED
  - Indication of motor rotation direction
  - Contact free determination of the rotation direction of running motors
- Indication of phase rotation
- Power supply 9062: 1 x 9V battery
- Included accessories:
  - Alligator clips - black (3)
  - Flexible test probes - black (3)
  - Test leads - black (3)

Price Each

Order Code	Product Code	1+	4+
WX38643	9062	£144.00	£139.35





## Sound Meters

### Introduction to Sound in the Workplace

- There are legislative requirements surrounding sound in the workplace
- Employers have a legal duty to protect the hearing of their employees
- Damage to hearing from exposure to loud noise at work is preventable
- The risks can be controlled by good management
- Employers have to reduce risk of damage to employees' hearing and take specific actions where the noise exposure of their employees is likely to be at or above any of three 'action levels'.
- The Law - Recent Changes
- The Noise at Work Regulations Act 1989 came into effect on 1 January 1990 and implemented as the European Directive 86/188/EEC
- A European Directive was recently adopted which means that we must introduce new UK Noise Regulations by February 2006, now in force as The Control of Noise at Work Regulations 2005.
- Under the previous legislation, the Noise at Work Regulations 1989, the first action level was an LEP,d of 85dB(A) and the second action level was an LEP,d of 90dB(A). There was also a peak action level of 200 pascals (equivalent to 140dB(C) or (Z)) for exposures to high level noise of short duration, such as cartridge operated tools. This identifies the risks of exposure to impulsive noise as opposed to continuous noise exposure.
- The action levels have changed with the new legislation. Employers are required to take specific measures at these new levels, including carrying out noise risk assessments.

#### Noise At Work - Guide to Noise Exposure Levels

##### Noise level Exposure Time

85dB 8 hours
88dB 4 hours
94dB 1 hour
100dB 5 minutes
115dB 47 seconds
121dB 14 seconds
130dB 1.75 seconds

Noise Level dB	Example
50-60	Normal Conversation
65-75	Loud radio
78-85	Busy street
100	Light tractors, Electric hand tools, Light garden machinery
85-120	General manufacturing industry
100-120	Heavy tractors, Steel construction, Road construction
120-130	Forestry equipment, Chainsaws, Textile industry, Paper and printing works, Heavy plant, Pneumatic drills
120-150	Airports, jet engines, motor sports

### Mini Digital Sound Level Meter



- Measuring range 40~130dB
- A frequency weighting
- Fast time weighting
- Precision 1/2 inch electret condenser microphone
- 26mm 4 digit LCD display
- Display updates every 0.5 seconds
- Auto backlight in dark environments
- Max/min hold
- Over display for out-of-range input
- Low battery indicator
- Auto power off after 15 minutes, preserves battery life
- Can be tripod mounted

- Supplied with wind muffler & battery
- Technical Specifications**
- |                 |                             |
|-----------------|-----------------------------|
| Range           | 40 to 130dB                 |
| Resolution      | 0.1dB                       |
| Accuracy        | ±3.5dB (94dB @ 1KHz)        |
| Frequency Range | 100Hz~8KHz                  |
| Power           | 9V PP3 battery x 1 (ALR-61) |
| Dimensions      | 128 x 51 x 32 mm            |
| Weight          | 131g                        |

Order Code	Product Code	1+	4+
WX43951	MSL-85A	£47.50	£45.60

### Sound Level Meter Class 2



- An affordable Sound Level Meter which fulfills IEC 60651 requirements
- Accuracy class 2 L
- Detachable microphone to avoid measurement errors
- Calibration via buttons
- Accurate quartz calibrator available as accessory
- Includes: Microphone, Wind cap and battery

Accuracy	Range	Resolution
+/-1 dB	32 - 130 dB	0.1 dB

Order Code	Product Code	1+	4+
WX32679	05638155	£227.85	£221.25

### Multi-Function Environment Meter



- A cost effective introduction to aid conformance to Health and Safety in the workplace
- Measures sound levels, light levels, % RH and temperature
- Electric condenser microphone for sound level measuring C frequency
- Cosine corrected silicone diode sensor for lux level
- Semi-conductor sensor for humidity measurements
- K Type input for °C/°F temperature measurements
- Includes: Case, Lux, RH and Wire Temperature Sensors, Battery, Wind Muffler

Function	Accuracy	Range	Resolution
Sound	+/-3.5 dB	35-130dB	±0.1 dB
Lux	±5%	0-20,000	1 Lux
%RH	±5%RH	25-95%	0.1% RH
Temperature	±3%Rdg +2°	-20-750°C	0.1°C

Order Code	Product Code	1+	4+
WX30029	PT-5035	£130.00	£124.80

### Sound Level Meter



- Precision sound level meters designed to meet IEC 61672-1 Class 2 with accuracy of ±1.4dB. A 1/2" electret condenser microphone ensures accurate and repeatable readings. A modern ergonomically shaped grip, high-intensity backlight and USB interface make these sound level meters extremely convenient to use. The SL-8852 features data logging for 32,600 readings.
- Auto ranging 30 to 130dB
- Manual ranges 30~80dB, 50~100dB, 80~130dB
- Large LCD display with function indicators, quasi-analogue bargraph and backlight
- User selectable 'A' & 'C' frequency weighting
- Fast or slow response
- Max/min & hold measurements
- Data logging for 32,600 readings (SL-8852)
- Data sampling interval can be set by the user from 1 second to 59 seconds (SL-8852)
- Over range and under range indication
- Low battery indication
- Auto power off after 15 mins of no activity
- Standard 4mm camera bush for tripod mounting
- USB interface for data transfer to a PC
- Analogue output AC: 1 Vrms, DC: 10mV per dB
- User calibration via a potentiometer using a standard sound level calibrator
- Supplied with battery, wind muffler, tripod, USB cable (2m), software & hard carry case

#### Technical Specifications

Range:	30 to 130dB
Resolution:	0.1dB
Accuracy:	±1.4dB
Frequency Range:	31.5Hz~8KHz
Power:	9V PP3 Battery
Dimensions:	278 x 76 x 50mm
Weight:	350g

Order Code	Product Code	1+	4+
WX41982	SL-8851	£165.00	£158.40
WX41983	SL-8852	£195.00	£187.20

## Light Meters

### Introduction to Lighting in the Workplace

- Light can be measured in many ways. Lux is the European standard for light measurement.
- Lux is a unit of illumination of one square metre, which is one metre away from a uniform light source
- Legislative Requirements
- Under Health & Safety at Work Act 1974 an employer has a duty to ensure the health and safety of employees
- The Act includes a duty to provide lighting to ensure that work can be done safely and that employees health or eyesight are not jeopardised
- Regulation no.8 of the workplace Regulations 1992 states employers must ensure that:-  
Every workplace has suitable and sufficient lighting  
This should be natural light, so far as reasonably practicable

### Pocket Light Meter



- Innovative pocket sized measurement technology for measuring ambient light conditions
- Small, compact and accurate
- Sensor is adjusted to the spectral sensitivity of the eye
- Hold reading function
- Max./min. values
- Range 0 to 99,999 Lux
- Units Lux, footcandle
- Includes:  
Wrist strap, belt holder, protective cap, batteries and calibration protocol

Price Each

Order Code	Product Code	1+	4+
WX42055	0560540	£115.50	£112.15

### Light Meter with Location Management



- In order to have good quality light, the luminous intensity in the workplace, hospitals, offices or schools has to fulfill specific minimum guidelines
- The revolutionary flexible shaft adjusts into almost any position
- A location list can be saved and separately saved luminous intensity values can be connected to form a curve using software
- This "light profile" provides information on the uniformity of the lighting

- Multi-point or timed mean calculation
- Logger function (3000 readings)
- Quick documentation on location with Testo printer
- Includes:  
Probe  
Batteries  
Certificate of Conformity

Accuracy	Range	Resolution
+/- 1	0 - 100,000	1 Lux (0 - 32,000) 10 Lux (0 - 100,000)

Price Each

Order Code	Product Code	Description	1+	4+
WX32669	05600545	Light Meter	£354.90	£344.61

± Special delivery applies. Please call for details

## Thermometers

### Air and Surface Temperature



- Surface temperature IR measurement with 1-point laser spot marking and 6:1 optics
- Air temperature measurement
- Display of differential temperature e.g between window and air temperature
- Hold function and max./min. values
- Units °C / °F
- Includes:-  
Batteries (AAA x 2)  
Wrist strap  
Belt holder  
Protective Cap

Surface Temperature	Air Temperature
-30 to 300°C	-10 to 50°C
Accuracy: ±2.0°C (-30 to 100°C)	Accuracy: ±0.5°C

Price Each

Order Code	Product Code	1+	4+
WX42050	05600810	£91.98	£89.31

Also see our  
Power Tools  
section



## Air Temperature and Humidity Measurement



- Long-term drift free Testo humidity sensor
- -2.5%rh accuracy with calibration protocol
- Includes dewpoint calculation and wet bulb
- Hold function and max./min. values

Includes:-

- Batteries (AAA x 2)
- Wrist strap
- Belt holder
- Protective Cap

Dimensions (inc cap) 119x46x25mm

Measuring range	Accuracy
-10 to 50°C	±2.5%rh (5 to 95%rh)

Price Each

Order Code	Product Code	1+	4+
WX42049	05600610	£140.70	£136.62

### 174T Mini Data Logger



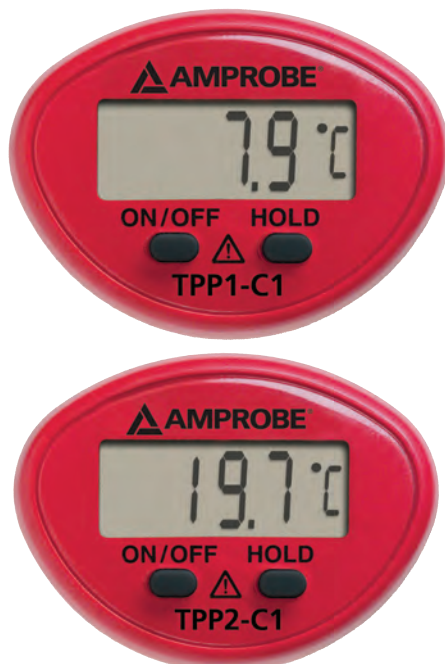
- The testo 174T mini data logger is ideal for the temperature measurement in refrigerators, freezers, cold rooms and cold shelves
- High data integrity, even with empty battery
- Large measurement data memory
- Watertight in accordance with IP65
- Compact and robust
- Conforms to EN12830
- Issue of alarms via display
- Data transfer to the PC via USB interface
- Probe type: Internal NTC temperature sensor

Measuring range: -30 to +70 °C  
Accuracy: ±0.5 °C (-30 to +70 °C)

Price Each

Order Code	Product Code	1+	4+
WX53678	05721560	£51.45	£49.96

## Pocket Thermometer



- Small handy thermometers that are ideal for everyday use
- Range -50 to 250 °C
- 0.1 °C resolution
- Data hold
- Long battery life, 200hr. typical
- Two models:
- TPP1-C Immersion piercing probe with protective sleeve
- TPP2-C Surface probe

### Price Each

Order Code	Product Code	1+	5+
WX36054	TPP1-C	£12.00	£11.61
WX38668	TPP2-C	£12.00	£11.61

## EXTECH SD800 CO2/Humidity/Temperature Datalogger



- Checks for Carbon Dioxide (CO2) concentrations
- Maintenance free dual wavelength NDIR (non-dispersive infrared) CO2 sensor
- Triple LCD simultaneously displays CO2, Temperature and Relative Humidity
- Measurement ranges: CO2 - 0 to 4,000ppm; Temperature - 32 to 122°F (0 to 50°C); Humidity - 10 to 90%RH
- Datalogger stores readings on an SD card in Excel® format for easy transfer to a PC
- Selectable data sampling rate: 5, 10, 30, 60, 120, 300, 600 seconds or Auto
- Complete with six AAA batteries, 2G SD memory card, universal AC adaptor, and mounting bracket

### Price Each

Order Code	Product Code	1+	4+
WX60960	SD800	£300.00	£285.92

## Pocket Checktemp



- Checktemp is provided with a unique calibration check function: simply activate a switch and the instrument will simulate an ice bath of 0.0°C signal that is displayed on the LCD within a range of +/-0.3°C. This system guarantees the accuracy of your measurement every time!
- The sharp tip probe of the Checktemp easily penetrates semisolid products, making routine controls simple and quick for both incoming and outgoing goods
- Checktemp is the ideal instrument for measuring temperature to HACCP requirements
- Probe: Stainless steel 105mm x dia 3mm (4.1x0.1")
- Battery: (1) 1.5V Approx 3000 hours use
- Dimensions: 66x50x25mm
- Weight: 122g

Accuracy	Range	Resolution
±0.3°C (-20 to 90°C)	-50.0 to +150.0°C	0.1°C
±0.5°C outside		

### Price Each

Order Code	Product Code	1+	4+
WX31395	CHECKTEMP	£29.74	£28.88
WX31415	HI-92200	£4.59	£4.46

**We provide access to technical expertise through your local Sales and Service Centre and authorised suppliers**

## Industry Differential Thermometer



- Testo 935 thermometer can measure the temperatures of 2 probes
- Ability to show readings simultaneously on the easy-to-read display
- The differential temperature can be called up and data is printed on site on the Testo printer
- 2 channels, Type K/J/T
- Display for T1, T2 and differential temperature
- TopSafe indestructible case protects from dirt and impact
- Includes battery and Certificate Of Conformity

	Accuracy	Range	Resolution
Probe K	±(0.7°C ±0.5% of mv)	-50 to 1000°C	0.1°C (-50 to 199.9°C)
	(-40 to 900°C)		1°C (200 to 1000°C)
	±(1°C ±1% of mv)		
	(-50 to -40.1°C)		
	±(1°C ±1% of mv)		
	(900.1°C to 1000°C)		
Probe J	±(0.7°C ±0.5% of mv)	-50 to 750°C	0.1°C (-50 to 199.9°C)
	(-50 to 750°C)		1°C (+200 to 750°C)
Probe T	+/-0.6°C (-20 to 70°C)	-50 to 350°C	0.1°C (-50 to 199.9°C)
	+/- (1°C +/-0.5% of mv)		1°C (+200 to 350°C)
	(-50 to -20.1°C)		
	+/- (1°C +/-0.5% of mv)		
	(70.1°C to 350°C)		

### Price Each

Order Code	Product Code	1+	4+
WX32673	05609221	£117.60	£114.19



## General Purpose Thermometer



- Ideal for measuring the temperature of a wide variety of industrial applications such as bearing housings and gearboxes
- Durable, user friendly, pocket sized instrument
- A flexible probe ensures effective surface contact for accurate temperature measurement
- Supplied with a handy pouch and belt clip
- Resolution of 1°C/F
- Auto power off function

Temperature Range	-40 to 200° C (-40 to 392° F)
Display Resolution	1° / °F
Probe	K - Type
Weight	95 g (0.2 lbs)
Battery	3 x AAA
Battery Life	4000 Hours
IP Rate	IP65

### Price Each

Order Code	Product Code	Description	1+	3+
WX32575	TK-610B	Thermometer	£131.79	£127.67

## Single Input K-Type Thermometer



NEW

- Single Input K-Type Thermometer
- These single input K-Type thermometers offer high accuracy and fast response times. Ideal for industrial and laboratory use.
- -50° to 1300°C x 0.1°
- Measures in °C, °F or Kelvin, user selectable
- Sampling rate of 2.5 times per second
- Over Range indication
- Data Hold freezes displayed values
- Max Hold displays highest measured value
- Auto Power Off
- Low Battery indication
- Room temperature compensation via 'TC' button. Temperature compensator that shows the room temperature when pressed with no k-type probe connected.
- 45mm LCD display with Backlight and function indicators
- Impact-resistant ABS case with protective rubber holster and flip out stand

- Supplied with carry case, rubber holster, 950mm bead probe and battery

Range	-50° to +1300°C, -58° to 2000°F, +223K to 2000K
Resolution	User Select 0.1° or 1° < 199.9°. 1° > 200, 1K
Accuracy	±(0.5%rdg + 1°C) (0° to 1000°C) ±(0.8%rdg + 1°C) (1000° to 1300°C)
Power	1 x 9V PP3 Alkaline Battery (LR-61)
Dimensions	162 x 76 x 39mm
Weight	210g

### Price Each

Order Code	Product Code	1+	4+
WX60962 ‡	TK-610B	£57.50	£55.20

‡ Special delivery applies. Please call for details

## Dual Input K-Type Thermometer



NEW

- This dual input K-Type thermometer offers high accuracy and fast response times. Ideal for industrial and laboratory use.
- -50° to 1300°C x 0.1°
- Measures in °C, °F or Kelvin, user selectable
- Dual Input thermometer accepts 2 inputs with individual measurements or as differential, T1 minus T2
- Sampling rate of 2.5 times per second
- Over Range indication
- Data Hold freezes displayed values
- Max Hold displays highest measured value
- Auto Power Off
- Low Battery indication
- 45mm LCD display with Backlight and function indicators
- Impact-resistant ABS case with protective rubber holster and flip out stand
- Supplied with carry case, rubber holster, 2 x 950mm bead probes and battery

Range	-50° to +1300°C, -58° to 2000°F, +223K to 2000K
Resolution	User Select 0.1° or 1° < 199.9°. 1° > 200, 1K
Accuracy	±(0.5%rdg + 1°C) (0° to 1000°C) ±(0.8%rdg + 1°C) (1000° to 1300°C)
Power	1 x 9V PP3 Alkaline Battery (LR-61)
Dimensions	162 x 76 x 39mm
Weight	210g

### Price Each

Order Code	Product Code	1+	4+
WX60963 ‡	TK-612	£67.50	£64.80

‡ Special delivery applies. Please call for details

## High Accuracy Dual Input K-Type Thermometer



- This dual input K-Type thermometer offers higher accuracy to 0.15% of reading and fast response times
- Suitable for industrial and laboratory use
- Measures in °C, °F, or °Kelvin, user selectable
- Impact-resistant ABS case with protective rubber holster & flip out stand
- 45mm LCD display with high intensity backlight and function indicators
- Sampling rate of 2.5 times per second
- Auto power off
- Max hold and data hold
- Over range indication
- Low battery indication
- Scan function for T1, T2, T1-T2, max, hold
- Room temperature compensation
- Dual Input Thermometer accepts 2 inputs with individual measurements or as differential measurements, T1 minus T2
- Supplied with two probes, carry case and battery

Range	-200° to +1372°C, -328° to 2501°F
Resolution	User Select 0.1° or 1°C or F (above 199.9°, use 1°), 1 K
Accuracy:	±(0.15%rdg + 1°C/1.8°F) (above -100°C/-148°F) T1,T2
Units	±(0.5%rdg + 2°C/3.6°F) (below -100°C/-148°F) T1,T2 ±(0.5%rdg + 1°C/1.8°F) T1-T2
Power	1 x 9V PP3 battery
Dimensions	165 x 76 x 43mm
Weight	403g

### Price Each

Order Code	Product Code	1+	4+
WX43952 ‡	TK-613	£87.50	£84.00

‡ Special delivery applies. Please call for details

## High Accuracy K-Type Thermometers with Infrared Probe



- High accuracy K-Type thermometer
- Single Input Thermometer TK-8891B accepts 2 inputs and displays individual and differential measurements, T1, T2 or T1-T2
- Dual Input Thermometer TK-8891 accepts 3 inputs and displays individual and differential measurements, T1, T2, T3, T1-T2 or T2-T3

- Measure in °C, °F & Kelvin, user selectable
- Impact-resistant ABS case with rubber grip
- Large 56mm LCD display with high intensity backlight and function indicators
- Simultaneous display of 3 readings from T1, T2, T3, T1-T2, T1-T3, T2-T3 with user selectable primary reading
- Max, min, average with elapsed time and time of max & min readings
- Data hold function
- Offset mode allows temperature compensations to be set up individually for each temperature channel T1, T2 & T3
- Auto power off
- Over range indication
- Low battery indication
- Supplied with carry case, infrared probe, 950mm bead probe(s) & battery

Range	-200° to +1372deg;C, -328° to 2501°F (K-Type), -30° to +550°C, -22° to 1022°F (IR)
Resolution	U0.1° (<1000°C), 1° (>1000°C)
Accuracy: K-Type IR	±(0.15%rdg +1°C/1.8°F) (above -100°C/-148°F) T1,T2 ±(0.5%rdg +2°C/3.6°F) (below -100°C/-148°F) T1,T2 ±(0.5%rdg +1°C/1.8°F) T1-T2 ±(2.0%rdg +2°C/3.6°F) ±(2.0%rdg +3°C/5.4°F) T1-T3 & T2-T3
Power	1 x 9V PP3 battery
Dimensions	203 x 75 x 50mm
Weight	280g (unit only), 475g (incl probes)

#### Price Each

Order Code	Product Code		1+	3+
WX43953 ‡	TK-8891B	Single Input with IR Probe	£135.00	£129.60
WX43954 ‡	TK-8891	Dual Input with IR Probe	£155.00	£148.80

‡ Special delivery applies. Please call for details

#### Digital K-Type Folding Probe Thermometer & Probe Kit



- This K-Type folding probe thermometer with 4 stainless steel probes offers ease of use, fast response and flexibility for a wide variety of temperature measurements
- The versatile probe kit is ideally suited for surface, air, liquids or semi-solid sampling with the 4 stainless steel probes supplied
- The probe connector is adjustable through 45, 90, 135 or 180 degree angles
- Measures °C or °F
- ABS case with a folding K-Type probe connector
- 4 K-Type stainless steel thermocouple probes: 2 penetration probes 125 x 3mm and 140 x 4mm, 1 air probe 230 x 3mm, 1 surface probe 250 x 4mm
- Probe connector adjustable through 45°, 90°, 135° or 180°
- Large 22mm LCD display with timer and function indicators
- Fast response time of 1 second
- Data Hold
- Min/Max memory since power on
- Auto power off after 1 hour
- Low battery indicator
- Suitable for all K-Type thermocouple probes with mini K-Type plugs
- Supplied with hard carry case, 4 K-Type probes, wrist strap & batteries

Range	-199°C to +300°C (-328° to +572°F) for probes supplied -199°C to +1300°C (-328° to +2000°F) with suitable probes
Resolution	0.1°C or F
Accuracy	±1°C/ 1.8°F (-49°C to +740°C/-56.2°F to +1364°F) ±2°C or 4°F others
Sampling	Every second
Power	2 x 3V button cell battery
Dimensions	155 x 50 x 20mm
Weight	75g

#### Price Each

Order Code	Product Code	Description	1+	3+
WX43955	TK-9218	Folding Probe Kit	£75.00	£72.00

#### Thermocouple Data Logger with USB Interface



- The MEL-USB-TC data logger measures and stores over 32,000 temperature readings for a K, J or T-Type thermocouple temperature probe with simple download of the stored data directly to your PC's USB port
- Thermocouple Data Logger Stores > 32,000 readings for a K, J, or T-Type thermocouple probe
- Thermocouple socket in the base of the unit accepts a K, J, or T-type thermocouple temperature probe with the standard mini plug
- USB interface for set up and data transfer to PC
- Set up allows the user to select thermocouple type, logging rate, start time, alarm limits and logging mode
- User selectable logging intervals min 1 sec, max 12 hours
- LED display for status information
- 2 user-programmable alarm thresholds
- Visual LED alarm if high or low limits exceeded
- PC analysis software runs under Windows 2000, XP or Vista with graphical display of data - total readings, zoom facility to individual readings and visual indication of alarm levels
- Supplied with software, battery and K-Type thermocouple

Range	-200°C to +1300°C (K-Type), -130°C to +900°C (J-Type), -200°C to +350°C (T-Type)
Resolution	1°C
Accuracy	±1.0°C (-10 to +40°C)
Logging Rate	every 1 sec, 10 sec, 1 min, 5 mins, 30 mins, 1 hr, 6 hrs, or 12 hrs selectable
Max Readings Capacity	32,000
Operating Temp Range	-35° to +80°C
Power	1 x 3.6V ½AA Lithium battery
Dimensions	118 x 27 x 26mm
Weight	39g

#### Price Each

Order Code	Product Code	Description	1+	3+
WX43956	MEL-USB-TC	Data Logger	£69.35	£66.58

#### Workplace Thermometer



- Specially designed to help monitor working environments in accordance with Workplace (Health, Safety & Welfare) Regulations 1992 Section 7
- Range -20° to +50°C
- °C, °F
- Division 1°C
- Spirit Filled
- Clear indication of 16°C level required for minimum workroom temperature
- Moulded white plastic case
- Wall mount keyway

#### Price Each

Order Code	Product Code	1+	4+
WX53555	TH-390	£10.00	£9.60

**We provide access to technical expertise through your local Sales and Service Centre and authorised suppliers**

## Calibration Tools

### Multifunction Process Calibrator/Meter



**EXTECH**  
INSTRUMENTS  
A FLIR COMPANY

**NEW**

- 0 to 24mA (-25 to 125%) readout
- 24V DC power source for 2-wire current loop
- 0 to 20V DC calibration source
- Source and measure 8 thermocouple type devices (J, K, T, E, C, R, S and N)
- CJC - Cold Junction Compensation function
- Up to five user adjustable calibration presets
- Palm-sized double molded housing and large dot-matrix backlit LCD
- High accuracy calibration function simulates precision thermocouple outputs for use in calibrating thermometers, transmitters, controllers or recorders
- Displays output in terms of millivolts or temperature based on thermocouple tables
- Zero adjustment, auto zero when power on and change mode
- Standard banana I/O ports and mini thermocouple connector
- Large battery bank for extended work cycle
- External power adapter for continuous work cycle
- Complete with test leads, alligator clips, calibration cables, 100V-240V AC universal adaptor with 4 plugs, six AA batteries, and hard carrying case

Price Each

Order Code	Product Code	Description	1+	3+
WX60964 ‡	PRC30	Calibrator	£455.00	£433.23

‡ Special delivery applies. Please call for details

## Infrared Thermometers

### TKTL 10 Infrared Thermometer



**SKF**

- Wide measurement range from -60 to +625 °C (-76 to +1157 °F); allows temperature measurements of many industrial applications
- Distance-to-spot ratio of 16:1; allows accurate temperature readings at a distance
- Fixed emissivity of 0.95; suitable for many applications
- Maximum temperature always shown; helps identify the real hotspots
- Auto shut off feature; helps optimise battery life

Price Each

Order Code	Product Code	Description	1+	4+
WX53635	TKTL-10	Infrared Thermometer	£78.96	£76.49

### TKTL 20 Infrared & Contact Thermometer



**SKF**

- Infrared temperature measurement range from -60 to +625 °C (-76 to +1157 °F)
- Contact temperature measurement range from -64 to +1400 °C (-83 to +1999 °F)
- Distance-to-spot ratio of 16:1; allows accurate temperature readings at a distance
- User selectable variable emissivity between 0.1 and 1.0; allows most surface temperatures to be measured
- Supplied with temperature probe TMDT 2-30 (max. 900 °C / 1652 °F); suitable for many direct contact applications
- Can be used with any SKF temperature probe
- User selectable, multiple temperature measurement modes including: maximum, minimum, average, differential and probe/infrared dual display, scan function
- User selectable high and level alarm levels with audible warning signal
- Mode dependant auto shut off feature optimises battery life
- Supplied in a sturdy carrying case

Price Each

Order Code	Product Code	Description	1+	4+
WX53636	TKTL20	Dual Thermometer	£162.07	£157.00

### IR608 Infrared Thermometer



**AMPROBE**

- "Pistol grip design" for comfortable grip
- Small enough to fit in your pocket
- Measuring range -18 °C to 275 °C
- Laser sighting for accurate targeting
- Display hold (7 seconds)
- Distance to spot size ratio 8:1
- Accuracy to 2%
- Backlit display
- Included with instrument: 9V battery (installed), operating instructions

Price Each

Order Code	Product Code	Description	1+	4+
WX60965	IR608	Infrared Thermometer	£71.00	£68.71

### Dewpoint Laser Temp Detector



**NEW**

- Dew Point Temperature Detector with Dual Laser Targeting
- A high accuracy combined temperature, humidity & dew point infrared thermometer with dual laser targeting for fast and accurate non-contact measurement of most surfaces. Suitable for a wide range of applications including storage, factories, warehouses, manufacturing, plant & general maintenance, HVAC, transportation & automotive and health & safety.
- 50° to 350°C x 0.1°, 0% to 100% x 0.1%
- User selectable °C or °F
- Select Temperature, Humidity or Dew Point by pressing the MODE button
- Just point, pull the trigger and read the display
- Dual laser pointers converge to a single spot when the unit is at the optimal distance from the object being measured
- Class II laser to identify the centre of the area being measured
- Distance to spot size ratio is 20 to 1 at the focal point
- Fixed emissivity at 0.95
- Response time less than 150 milliseconds
- 37.0mm LCD dual display with Backlight and function indicators
- Trigger Lock for continuous measurement
- Maximum display
- Over Range Indicator - LED warning light that shows three different colours; green indicates normal (no moisture), yellow indicates close to dew point & red indicates dew point
- Auto Power Off after 15 minutes of no activity
- Low Battery indication
- Supplied with carrying case, manual and battery

	Temperature	Humidity	Dew Point
Range	-50°C to +350°C	0 to 100%RH	-30°C to +100°C
Resolution	0.1°C	0.1%RH	0.1°C
Accuracy	±3.5°C (-50°C to +20°C)	±3.5%RH (20% - 80%)	±2.0% of reading
	±1% of reading ±1.5°C (+20°C to +350°C)		
Power	1 x 9V PP3 Alkaline Battery (LR-61)		
Dimensions	168 x 82 x 58mm		
Weight	163g		

Price Each

Order Code	Product Code	Description	1+	4+
WX60966	HT-8663	Dewpoint Laser Temp Detector	£91.00	£87.36

### Dual Laser IR Thermometer with Color Alert





- Great for processes that require temperature control and monitoring
- Fast and accurate measurements at 12" where the two lasers converge with 12:1 field of view
- Measures up to 950°F (510°C)
- Blue backlit dual LCD display changes to Red backlit when reading exceeds High or Low set points
- Exclusive 150 millisecond instantaneous response for capturing spikes in temperature
- Max mode captures and holds rapidly changing temperatures
- Lock function for continuous readings (disables auto power off)
- Adjustable emissivity increases measurement accuracy for different surfaces
- Double molded housing
- Complete with case and 9V battery
- Specifications:

Laser Convergence Distance: 12" (30.5cm)

Range: -4 to 950°F (-20 to 510°C)

Repeatability: ±0.5% or 1.8°F/1°C

Basic Accuracy: ±(1% of rdg + 2°F/1°C)

Max resolution: 0.1°F/°C

Emissivity: 0.10 to 1.00 Adjustable

Field of View (Distance to Target): 12:1

Dimensions: 5.7x4x1.6" (146x104x43mm)

Weight: 5.7oz (163g)

Price Each

Order Code	Product Code	1+	4+
WX53588	42509	£76.00	£72.75

### Fluke 63 Infrared Thermometer



**FLUKE**

- The professional's diagnostic tool
- The Fluke 63 non-contact thermometer is the ideal professional
- This handheld portable tool enables professionals to research heating and ventilation problems, monitor the status of electrical motors and electrical panels and diagnose car malfunctions with ease
- Expanded measurement range up to 535°C (999°F)
- High-resolution optics
- High accuracy: 1% and repeatability: 0.5%
- MAX temperature display and laser targeting
- LCD backlit display for easy reading
- Distance to spot: 12:1
- Response time of 500 milliseconds
- Takes 9V alkaline battery

Accuracy	Range
-32 to -26°C (-25 to -15°F): ±3°C (±5°F)	-32 to 535°C (-25 to 999°F)
-26 to -18°C (-15 to 0°F): ±2.5°C (±4°F)	
-18 to 23°C (0 to 73°F): ±2°C (±3°F)	
23 to 510°C (73 to 950°F): ±1	
or ±1°C (±2°F), whichever is greater	
Above 510°C (950°F): ±1.5 % of reading	

Price Each

Order Code	Product Code	1+	4+
WX38639	63	£187.00	£181.81

### Dual Laser Infrared and Contact Thermometer



**SKF NEW**

- A contact and non contact infrared thermometer with a wide measurement range and dual laser sighting
- Wide infrared temperature measurement range from -60 to +1 000 °C (-76 to +1 832 °F).
- Contact temperature measurement range from -64 to +1 400 °C (-83 to +1 999 °F)
- Dual laser sighting feature defines the diameter of the area being measured; helps the user to precisely pin-point the temperature measurement area
- Distance-to-spot ratio of 50:1; allows accurate temperature readings at long distances or for measuring temperatures of small areas
- User selectable variable emissivity between 0,1 and 1,0; allows most surface temperatures to be measured.
- Supplied with temperature probe TMDT 2-30 (max. 900 °C/ 1 652 °F); suitable for many direct contact applications
- Can be used with any SKF temperature probe
- User selectable, multiple temperature measurement modes including: maximum, minimum, average, differential and probe/infrared dual display, scan function
- User selectable high and level alarm levels with audible warning signal
- Mode dependant auto shut off feature optimises battery life
- Supplied in a sturdy carrying case

#### Technical data

Designation	Infrared digital thermometer TKTL 30
Description	Infrared digital thermometer
Temperature rangeusing infrared	-60 to +1 000 °C (-76 to +1 832 °F)
Temperature rangeusing probe	-64 to +1 400 °C (-83 to +1 999 °F)
Probe supplied	TMDT 2-30, suitable for use up to 900 °C (1 650 °F)
Environmentallimits	Operation 0 to 50 °C (32 to 120 °F) 10 to 95% R.H. Storage -20 to 65 °C (-4 to 150 °F) 10 to 95% R.H.
Full range accuracy	±2% of reading or 2 °C (4 °F) whichever is greater
(Tamb=23 ±3 °C)	
Response time (90%)	<1 000 ms
Display	LCD
Displayedresolution	0,1 °C/F from -9,9~199,9, otherwise 1 °C/F
Distance to spotsize	50:01:00
Spectral response	8~14 µm
Emissivity	0,1~1,0
User selectablebacklit display	On/Off
User selectablelaser pointer	On/Off
Measurement modes	Max, min, average, differential, probe/IR dual temperaturemodes
Alarm modes	High and low level alarm level with warning bleep
Laser wavelength	630~650 nm
Laser	Class 2
Maximum laser power	1 mW
Dimensions	203,3 x 197 x 47 mm (8.0 x 7.7 x 1.8 in.)
Packaging	Sturdy carrying case
Case dimensions	340 x 200 x 65 mm (13.4 x 7.9 x 2.6 in)
Weight	Total (incl. case): 1 080 g (2.38 lbs) TKTL 30: 370 g (0.815 lbs)
Battery	2 x AAA Alkaline type IEC LR03
Battery lifetime	140 hours with laser and backlight off. Otherwise 18 hours
Switch off	IR mode automatic after 60 s after trigger is released (60 min can be manually selected) Probe mode automatic after 12 min
EMC standards	EMC 2004/108/EC

Price Each

Order Code	Product Code	1+
WX51150†	TKTL30	£221.27

† Special delivery applies. Please ask for details

### Fluke VT02 Visual IR Thermometer



**FLUKE NEW**

The VT02 Visual IR Thermometer combines the convenience of a spot thermometer with the visual advantage of a thermal imager creating a brand new tool category – a troubleshooting camera with infrared heat map. Using hyper-thin pyro electric technology, Fluke discovered a way to push the limits of this technology pioneering an array dense enough to create an infrared heat map. The VT02 Visual IR Thermometer is the missing link – the ultimate in-between tool for those times when a single spot temperature reading isn't enough and a high-resolution thermal image is more than you need.

Price Each

Order Code	Product Code	Description	1+
WX60959	VT02	Visual IR Thermometer	£549.00

### Mini Infrared Thermometer



**testo**

- The compact 80mm Infrared Thermometer fits into any pocket
- Rapid measurements
- High accuracy in any critical area
- Packaging remains undamaged
- TopSafe is dishwasher safe and IP 65 waterproof
- Display of min and max values
- Scan mode for permanent measurement
- Emissivity of 95 and 1.00

#### Specification Table

Range	-25 to +250°C
Accuracy	±3°C (-25 to 21°C) ±1°C (-2 to 40°C) ±1.5°C (+40 to 150°C) ±2°C (remaining range)
Resolution	0.1°C (-9.9 to +199.9°C) 1°C (remaining range)
Operating Temp	0 - +50°C
Dimensions	80 x 31 x 19 mm

Price Each

Order Code	Product Code	1+	4+
WX38700	05638051	£55.13	£53.53

## Fluke Infrared Thermometers



FLUKE

NEW

- Designed with your on-the-job needs in mind, the new Fluke 62 MAX and 62 MAX+ infrared thermometers are everything you'd expect from the experts in measurement tools
- Small in size, extremely accurate and very easy to use.
- IP54 rated for dust and water resistance.
- Precise yet rugged enough to take a 3-meter drop
- The 62 MAX and 62 MAX+ are so tough, they're the only IR thermometers around you can handle without care

Specifications	62 Max	62 Max+
Temperature range	-30°C to 500°C (-22°F to 932°F)	-30°C to 650°C (-22°F to 1202°F)
Accuracy	± 1.5°C or ± 1.5% of reading ± 2.0 at -10°C to 0°C ± 3.0 at -30°C to -10°C	± 1.0°C or ± 1.0% of reading ± 2.0 at -10°C to 0°C ± 3.0 at -30°C to -10°C
Response time (95%)	<500ms (95% of reading) Spectral response: 8 to 14 microns Emissivity: 0.10 to 1.00	<300ms (95% of reading) Spectral response: 8 to 14 microns Emissivity: 0.10 to 1.00
Optical resolution	10:1 (calculated at 90% energy)	12:1 (calculated at 90% energy)
Display resolution	0.1°C (0.2°F)	0.1°C (0.2°F)
Repeatability of ± 0.8% of reading or readings (2°F) whichever is greater	± 0.8% of reading or ± 1.0°C (1.8°F) whichever is greater	± 0.5% of reading or ± 0.5°C (1°F) whichever is greater
Power	AA Battery	AA Battery

Price Each

Order Code	Product Code	Description	1+
WX32366	62MAX	Infrared Thermometer	£84.00
WX60961	62MAX+	Infrared Thermometer	£100.00

## Humidity Meters

### Thermo-Hygrometer



- Simultaneous display of humidity in % RH & temperature in °C or °F
- 63mm x 80mm large digit LCD display
- Min/max memory since last reset
- Single button allows min/max readings to be displayed separately for temperature and humidity
- Reset clears memory for both temperature and humidity
- Impact-resistant ABS case with a flip out desk stand for free standing applications and key-way for wall mounting

### Specification Table

Temp Range	-10°C to +50°C
Humidity Range	25% to 98% RH
Resolution	0.1°C, 1% RH
Accuracy	±1°C, ±5% RH
Power	1 x 1.5V AA battery (supplied)
Dimensions	138x95x20mm only
Weight	143g

Price Each

Order Code	Product Code	1+	4+
WX43957	MHT-986H	£16.00	£15.36

### Thermo Hygrometer



- Affordable thermo hygrometer
- Continuous measurement of %rh, temperature and temperature dew point; Min/Max display
- Humidity sensor not damaged by water saturation
- Large easy to read display
- 2 to 98%rh Measuring range

Price Each

Order Code	Product Code	1+	4+
WX38697	05606081	£58.49	£56.79

### Material Moisture, Air Temperature and Humidity



- Measurement of wood moisture e.g. beech, spruce, larch, oak, pine and maple
- Air temperature and humidity for monitoring drying processes
- Curves for cement screed, concrete, plaster, anhydrite, cement, mortar, lime and brick
- Hold and auto-test functions
- Includes:-**
  - Batteries (AAA x 2)
  - Wrist strap
  - Belt holder
  - Protective Cap
  - Dimensions (inc cap) 119x46x25mm

Material moisture measuring range: 0 to 90%	Accuracy: ± 1% (conductivity)
Air humidity measuring range: 0 to 100%rh	Accuracy: ± 2.5%rh (5 to 95%rh)
Air temperature: -10 to 50°C	Accuracy: ± 0.5%

Price Each

Order Code	Product Code	1+	4+
WX42056	05606062	£166.95	£162.11

### Humidity and Temperature meter



- Dual display of relative humidity and temperature
- Relative function monitors humidity and temperature changes
- Extended probe stem to easily access air ducts
- Min/max readings
- Data hold to freeze measurement value on display
- Capacitive sensor with protective cover
- Auto power off
- Soft carrying case

Accuracy	Range	Resolution
5 % RH to 95 % RH: ±3 % RH	0 to 100 % RH	0.1 %RH
-20 °C to 60 °C: ±0.8 °C	-20 °C to 60 °C (-4 °F to 140 °F)	0.1 °C/0.1 °F

Price Each

Order Code	Product Code	1+	4+
WX38669	TH-3	£93.00	£90.00

### Temperature Humidity Meter



FLUKE

- Quickly take accurate humidity and temperature readings in the air
- Temperature and humidity are two important factors in maintaining optimal comfort levels and good indoor air quality
- The Fluke 971 is invaluable for facility maintenance and utility technicians, HVAC-service contractors, and specialists
- Lightweight, rugged, and easy to hold, the Fluke 971 is the perfect tool for monitoring problem areas
- Measures dew point and wet bulb
- 99 Record storage capacity
- Min/max/avg data hold

- Ergonomic design with built-in belt clip and protective holster
- Backlit, dual readings display
- Battery life: 4 AA alkaline, 200 hours

Temperature Range	-20 °C to 60 °C
Temperature Accuracy	
0 °C to 45 °C	± 0.5 °C
-20 °C to 0 °C and 45 °C to 60 °C	± 1.0 °C
Resolution	0.1 °C
Response Time (temperature)	500 ms
Temperature Sensor Type	NTC
Relative Humidity Range	5% to 95% R.H.
Relative Humidity Accuracy	
10 % to 90 % R.H. @ 23 °C	± 2.5 % R.H.
<10 % > 90 % R.H. @ 23 °C	± 5.0 % R.H.
Humidity Sensor	Electronic capacitance polymer film sensor
Data Storage	99 points
Response Time (humidity)	For 90% of total range – 60 sec with 1 m/s air movement

#### Price Each

Order Code	Product Code	1+	5+
WX38644	971	£175.00	£170.14

### Precision Thermo-Hygrometer



- Measures absolute and relative humidity
- Compact, easy-to-use, robust instrument for fast, accurate and repeatable measurements of absolute and relative humidity, air temperature, dew point & wet bulb temperatures
- Ideal for single-handed operation when taking measurements in air stream
- Suitable for monitoring air conditioning and heating system ducts, controlled environments, storage areas and other critical areas
- Displays relative humidity in %RH, absolute humidity in grams per cubic meter(g/m³) or grains per cubic foot(gr/ft³)
- Displays air temperature, dewpoint & wet bulb temperature in °C or °F
- Impact-resistant ABS case with integrated humidity/temperature probe sensor and shaped rubber moulded grip
- Precision capacitance humidity sensor for fast and accurate readings
- Thermistor temperature sensor
- Large high-contrast 56mm backlit LCD dual display with function indicators
- Simultaneous display of humidity and temperature readings
- Min/max values
- Data hold freezes displayed readings
- Low battery indication
- Auto off after 10 minutes can be user disabled
- Tripod mount bush
- Supplied with hard carry case & battery

Humidity Range	0% to 100% RH
Absolute Humidity	0 to 500g/m³, 0 to 208.5gr/ft³
Temperature Range	-30° to +100°C
Resolution	0.1% RH, 0.1°C
Accuracy	±2% RH (+40 to +60%RH) ±3% RH (+20 to +40% and +60 to +80%RH) ±4% RH (0 to +20% and +80 to +100%RH) ±1°C (-20° to +60°C), ±1.5°C (rest of range)
Power	9V PP3 battery
Dimensions	300 x 75 x 50mm
Weight	400g

#### Price Each

Order Code	Product Code	1+	4+
WX43959 ‡	HT-8892	£145.00	£139.20

‡ Special delivery applies. Please call for details

### Humidity & Temperature Data Logger



- Two channel humidity and temperature datalogger with 32,700 readings memory
- Compact and easy-to-use dual channel data logger for efficient monitoring of temperature and humidity values
- Ideal for monitoring food, medical product storage, warehousing & distribution, containers, industrial processes, laboratory environments and museums
- Simultaneous display of temperature °C or °F and Humidity in %RH
- Impact-resistant ABS and rubber moulded case
- Large 25mm LCD display
- Displays time and date, current readings, max/min values, recording and logger full indicator
- Memory for 32,700 readings
- Selectable measurement cycle from every 1 second to 24 hours
- LED indicators for alarm and recording status
- Visual alarm in LCD display if user-defined max/min values exceeded
- Low battery indication
- USB interface for set up and data transfer to a PC
- Analysis software runs under Windows 2000, XP or Vista with graphical display of data with zoom facility for detailed views
- Supplied with wall holder, padlock, software, USB cable & battery

	Temperature	Humidity
Range	-40° to +70°C	0 to 100% RH
Resolution	0.1°C	0.1% RH
Accuracy	±2°C (-40 to -10°C) ±1°C (-10 to +40°C) ±2°C (+40 to +70°C)	±5%RH (0 to 20% & 80 to 100%) ±3.5%RH (20 to 40% & 60 to 80%) ±3%RH (40 to 60%)
Memory	32,700 readings	
Power	3.6V ½AA Lithium battery	
Dimensions	94 x 48 x 33mm	
Weight	115g	

#### Price Each

Order Code	Product Code	1+	3+
WX43961 ‡	DT-172	£99.00	£95.04

‡ Special delivery applies. Please call for details

### pH Meters

#### Waterproof Pocket pH Testers



- Other features include an auto-off switch, hold facility, and user replaceable pH electrode with a clogging resistant fibre junction
- Auto temperature compensation & auto calibration at 1 or 2 points with choice of 5 memorised buffers
- The new design waterproof casing with rubberised body floats if dropped in water, and has a pocket clip
- New design pocket tester with simultaneous display of pH & Temperature on a dual level LCD screen
- Auto switch-off and battery condition indicator
- Auto temperature compensation
- Auto calibration

	Accuracy	Range	Resolution
HI-98127	°0.1pH	0.0 to 14.0pH 0.0 to 60.0°C	0.1pH 0.1°C
HI-98128	°0.5pH	0.00 to 14.00pH 0.0 to 60.0°C	0.01pH 0.1°C

#### Price Each

Order Code	Product Code	Description	1+	4+
WX31421	HI-98127	Waterproof pH Meter	£77.01	£74.78
WX39941	HI-98128	Waterproof pH Meter	£75.90	£73.70
WX31393	77400P	Calibration kit (pH4.01 and 7.01)	£11.00	£10.68
WX31408	HI-73127	Replacement pH Sensor	£40.75	£39.57



## Waterproof pH/Temperature Meter



- Waterproof hand held pH meter designed specifically for ease of use without compromising on accuracy
- Just two buttons are used to operate all the functions on the meters, with on-screen prompts
- Combined pH and temperature probe
- 1500 hours approx. battery life, with battery power check and auto-off facility
- Auto pH calibration at 1 or 2 points with two sets of memorised buffers
- Supplied complete with probe, batteries, buffer sachets, carry case and two-year meter guarantee

Accuracy	Range	Resolution
±0.02 pH	-2.00 to 16.00 pH	0.01 pH
±0.5 to 60°C;	-5.0 to 105°C	0.1°C
±1 to 105°C		

### Price Each

Order Code	Product Code		1+	4+
WX31427	HI-991001	Waterproof Meter	£244.48	£237.39
WX31397	HI-1296D	Spare Probe	£127.33	£123.64
WX31407	HI-72911D	Industrial pH Electrode	£117.15	£113.75
WX39940	FC202D	pH Food Electrode	£122.24	£118.70
WX31418	HI-935B00T-I	Protective Rubber Boot	£25.47	£24.73

## Conductivity Meters

### Waterproof Conductivity/TDS/Temp Testers



- Waterproof hand held pH meter designed specifically for ease of use without compromising on accuracy
- Just two buttons are used to operate all the functions on the meters, with on-screen prompts
- Combined pH and temperature probe
- 1500 hours approx. battery life, with battery power check and auto-off facility
- Auto pH calibration at 1 or 2 points with two sets of memorised buffers
- Supplied complete with probe, batteries, buffer sachets, carry case and two-year meter guarantee

	Accuracy	Range	Resolution
HI-98311	±2% EC	0 to 3999 µS/cm	1 µS/cm
	±2% TDS	0 to 2000 ppm	1 ppm
	±0.5°C	0 to 60°C	0.1°C
HI-98312	±2% EC	0.00 to 20.00 µS/cm	0.01 mS/cm
	±2% TDS	0.00 to 10.00 ppt	0.01 ppt
	±0.5°C	0 to 60°C	0.1°C

### Price Each

Order Code	Product Code	Description	1+	4+
WX31423	HI-98311	Multi-Tester	£74.88	£72.71
WX31424	HI-98312	Multi-Tester	£74.88	£72.71
WX31401	HI-7031	1413 µS/cm Solution 460ml	£14.78	£14.35
WX31402	HI-7032	1500ppm Solution 460ml	£14.78	£14.35
WX31400	HI-7030	12.88mS/cm Solution 460ml	£14.78	£14.35
WX31399	HI-70038P	6.44ppt (at 0.5conv) 25 x 20ml Sachets	£19.35	£18.79

‡ Special delivery applies. Please call for details

## Tachometers

### Tachometer TMRT series



- User-friendly and accurate, utilising laser or contact for measuring rotational and linear speed
- Allows easy and quick non-contact measurement at safe distance from rotating machinery
- Provides large angular range of ± 80° to target, facilitating easy measuring in areas where straight-line access is difficult
- User can select to measure in rpm, rps, m, feet or yards per minute or second, distances or count revolutions, or time interval
- Large inverting LCD display facilitates easy reading even when pointing the unit down into the machinery
- Compact design; easy to use, one-hand operated instrument
- Intrinsically safe (Ex) version has been tested and certified according to the latest ATEX standards

Accuracy	Range	Resolution
±6% of reading	0.001 to 1.999	0.001
± 2 digits	0.01 to 19.99	0.01
	0.1 to 199.9	0.1

### Price Each

Order Code	Product Code	Description	1+	3+
WX36064	TMRT-1	Standard Version	£328.03	£317.77
<b>Speed Range: 3-99999 rpm</b>				
WX36065	TMRT-1EX	Intrinsically Safe	£548.69	£532.07
<b>Speed Range: 3-99999 rpm</b>				

## Non-Contact RPM - Tachometer



- Easy one-hand operation
- Simply attach a reflector to the object to be measured, and then point the red light beam at the reflector and measure
- Saves mean/maximum value (last reading)
- RPM can be easily measured without contact
- Set also includes:-
  - Case
  - Batteries
  - Reflectors
  - Multi-point or timed mean calculation

### Specification Table

Probe Type	Optical
Range	"1 - 99
Accuracy	0.02%±
Resolution	0.01 rpm (1-99.9 rpm)
	0.1 rpm (100-999.9 rpm)
	0.1 rpm (1000-9999.9 rpm)
Operating Temp	0 - 50°C
Power	2 x AA
Dimensions	144 x 58 x 20 mm

### Price Each

Order Code	Product Code	1+	4+
WX32674	05630465	£175.35	£170.27

## Non-Contact LED Tachometer



This highly effective Non-Contact unit is designed for the engineer who requires an easy to use, high quality, high reliability tachometer to provide accurate RPM measurement.

- Easy to aim beam for quick measurements - brilliant red LED light spot for working in difficult lighting conditions
- Long optical range - 450mm
- Wide optical angle - +/- 70 degrees
- Safe speed checks 1.00 to 60,000 rpm
- Light weight and pocket sized - Dimensions: 145x60x28mm
- Supplied with: reflective tapes, batteries, instructions manual and light protective case

### Price Each

Order Code	Product Code	Description	1+	4+
WX42003	ECOTACH	LED Tachometer	£105.00	£101.32

## Non-Contact / Mechanical RPM - Tachometer



- Easy one-hand operation
- An optical measurement becomes a mechanical measurement by simply attaching an adaptor for probe tip or surface speed disc
- Measurement of rpm, speeds and lengths
- Testo 470, the ideal combination of optical and mechanical RPM measurement
- Set also includes:-  
Transport case  
Surface speed disc  
Probe tip  
Adaptor  
Batteries  
Reflectors

MODEL		
Probe Type	Optical	Mechanical
Range	"1 - 99	999rpm"
Accuracy	0.02%±	0.02%±
Resolution	0.01 rpm (1-99.9 rpm) 0.1 rpm (100-999.9 rpm) 0.1 rpm (1000-99999 rpm)	
Operating Temp	0 - 50°C	0 - 50°C
Power	2 x AA	2 x AA
Dimensions	175 x 60 x 28 mm	175 x 60 x 28 mm

Price Each

Order Code	Product Code	1+	4+
WX38698	05630470	£243.60	£236.54

## Optical RPM Measurement



- Innovative pocket sized measurement technology
- Optical rpm measurement with LED spot marking
- Includes:-  
Batteries (AAA x 2)  
Wrist strap  
Belt holder  
Protective Cap  
Calibration protocol

Dimensions (inc cap) 119x46x25mm

Measuring range: 100 to 29,000 rpm Accuracy: ± (0.02% of m.v)

Units: rpm, rps

Price Each

Order Code	Product Code	1+	4+
WX42046	05600460	£135.45	£131.52

## Stroboscopes

### SKF TKRS 10 Stroboscope



- The SKF TMRS 1 is a portable, easy-to-use stroboscope that allows the motion of rotating or reciprocating machinery to appear frozen, facilitating inspection without stopping the machine
- The bright flash allows better illumination of the application at a distance, giving a wider viewing area
- Flash rate is quick and easy to adjust using the variable dial rate. Allowing the required speed to be reached within a matter of seconds
- Phase shift mode for optimum inspection of gears, rolls, fans, pulleys. The feature of interest can be rotated to the correct position for inspection
- Easy to read LCD display
- Battery powered with long running time per charge (up to 2.5 hrs)
- Includes universal AC adaptor that can be used worldwide
- Technical Specification:-  
Flash rate range: 40-12,500 flashes per minute (FPM)  
Flash rate accuracy: +/- 0.5 FPM or +/- 0.01% of reading, whichever is greater  
Flash setting resolution: 100 to 9999 FPM - 0.1FPM, 10,000 to 12,500 FPM - 1FPM  
Tachometer range: 40 - 59,000 RPM  
Tachometer accuracy: +/- 0.5 RPM or +/- 0.01% of reading, whichever is greater  
Flash tube life: 100 million flashes  
Flash duration: 9-15 µ sec  
Light power: 154 mJ per flash  
Battery type: NiMH, rechargeable, removable

Display: 8 character by 2 line LCD, alpha-numeric  
Display update: continuous  
Display resolution: 100 to 9999 FPM - 0.1FPM, 10,000 to 12,500 FPM - 1FPM  
External trigger input: 0-5V TTL type via stereo phono jack  
Operating temperature: 10 °C to 40 °C (50 °F to 104 °F)

Price Each

Order Code	Product Code	1+	4+
WX38703 ‡	TKRS10	£564.39	£546.72

‡ Special delivery applies. Please call for details

### SKF TKRS 20 Stroboscope



- Stroboscope TKRS 20 with remote flash sensor
- Low energy consuming LED light source lets the rechargeable power pack to typically operate for at least twelve hours
- Bright and powerful flash gives a good target illumination at a distance, with a focused viewing area, and is ideal for outdoor use
- Flash rates of up to 300 000 flashes per minute cover most high speed applications. For routine inspections, the powerful lamp mode is useful
- A remote optical sensor is included enabling the flash rate to be easily triggered, and also enables the stroboscope to be used as a tachometer
- Easy to read LCD display shows user settings, and enables the ten user programmable flash rate memories to be quickly recalled
- Using the optional cable TKRS C1, the TKRS 20 can be connected to a SKF Microlog

Flash rate range	30 to 300 000 flashes per minute (f/min.)
Optical sensor flash rate range	30 to 100 000 f/min.
Flash rate accuracy	±1 f/min. or ±0.01% of reading, whichever is greater
Flash setting and display resolution	30 to 9 999 f/min.; 0.1 f/min., 10 000 to 300 000 f/min.; 1 f/min.
Tachometer range	30 to 300 000 r/min.
Tachometer accuracy	±0.5 r/min. or ±0.01% of reading, whichever is greater
Flash source	LED
Flash duration	0.1°-5°
Light power	1 600 lux at 6 000 f/min. at 0.2 m (8 in.)
Power pack type	NiMH, rechargeable and removable
Power pack charge time	2-4 hours
Run time per charge	12 hours typical usage 6 hours with optical sensor
Battery charger AC input	100-240 V AC, 50/60 Hz
Display	8 character by 2 line LCD, alphanumeric
Display update	continuous
Controls	Power, x2, x1/2, phase shift, external trigger, pulseshift and memory
External trigger input	0-5 V TTL type via stereo phono jack
EXTL. trigger to flash delay	5 ms maximum
Clock output 0-5 V TTL	Type signal via stereo phono jack
Weight	600 g (1 lb, 5 oz.)
Operating temperature	10 to 40 °C (50 to 104 °F)
Storage temperature	-20 to +45 °C (-4 to +113 °F)

Price Each

Order Code	Product Code	1+	4+
WX60967 ‡	TKRS20	£738.31	£715.20

‡ Special delivery applies. Please call for details

## Light Intensive Stroboscope



- The Pocket Strobe™ hand held stroboscope measures and inspects rotations and vibrations
- It facilitates the measurement of very small objects or in hard to access places
- The energy optimised switching electronics and light-intensive xenon flash lamp facilitate a high light intensity (approx 800 lux)
- High setting accuracy and stability thanks to dynamic setting dial
- Powerful rechargeable battery pack for minimum 1 hour operation time over the frequency range
- Automatic trigger to synchronise flash sequence
- Comes with transport case, recharger with 4 country adaptors and trigger signal connector

### Specification Table

Range	+30 to +12500 rpm
Accuracy	±0.01% of mv ±1 digit (+30 to 12500rpm)
Resolution	1 rpm (+30 to +12500rpm)
Illumination	800 Lux (at distance of approx 20cm)
Operating Temp	0 - +40°C
Dimensions	240 x 65 x 50 mm

### Price Each

Order Code	Product Code	1+	4+
WX38699 ‡	05634760	£721.98	£701.05

‡ Special delivery applies. Please call for details

## HVAC Instruments

### Fluke HVAC Pro



## FLUKE

- Two-in-one infrared and contact thermometer (K-type thermocouples) for HVAC/R professionals
- Used for scanning, electrical maintenance, electric motors, HVAC/R systems, steam systems, ducts, motors, radiant heating, pipes, corroded connections and wires
- Measurements can be made at a safe distance and no need for a ladder
- Preserves investment because it's compatible with existing K-type thermocouple probes
- Included velcro pipe probe and differential temperature function obtains quick, accurate measurements for superheat and sub-cooling. Previously, a two channel contact thermometer would have been required for this
- Light - just 12 ounces (34 g) and portable
- Single point laser sighting shows approximate centre of measurement area
- Min, Max, and Dif functions provide fast data to identify problems
- Three measurement techniques:  
Spot: determine the absolute surface temperature of an object  
Temperature differential: compare two spot measurements against each other  
Scanning: detect changes along a wide or continuous region target
- Durable plastic storage case, Thermocouple K Velcro pipe probe and 2 AA batteries all included

Model	Fluke 561
Temperature range	-40 to 550°C (-40 to 1022° F)
Display Resolution	0.1°C (0.1° F) of reading
D:S (Distance to spot size)	12:01
Easy Emissivity Selector	Adjustable with three settings: Low (0.3) Medium (0.7) High (0.95)
Display Accuracy	±1.0% of reading
[Assumes ambient operating temp of 23°C(73°F) to 25°C(77°F)]	±1% of reading or ±1°C (±2°F) below 0°C/32°F / ±1°C (±2°F) ± 0.1°/1°
Response time	500 mSec (95% of reading)
Repeatability	±0.5% of reading or ±1°C (±2°F) whichever is greater
Spectral response	8 µm to 14 µm
Laser sighting	Single point laser
Laser shutoff	Laser turns off above ambient temperature of 40°C (104°F)
Laser power	Class 2(II) operation; Output <1mW / wavelength 630-670 nm
Relative humidity	10% to 90% RH non-condensing at <30°C (86°F)
Battery life (alkaline)	12 hours
Display hold	7 seconds
Operating temperature	0°C to 50°C 32°F to 120°F
MAX/MIN/DIF temperatures	Yes
Thermocouple Type K mini adapter input	YES compatible with standard K type probes with mini-connector.
Thermocouple Type K Velcro Pipe Probe	YES with a temperature range of 0°C to 100°C and accuracy of ±2.2°C
Thermocouple Type K probe total length	102 cm (40 in)

### Price Each

Order Code	Product Code	1+	4+
WX38635 ‡	561 Pro Gun	£131.00	£126.77
WX38646 ‡	H6 Holster	£21.00	£20.42

‡ Special delivery applies. Please call for details

## Air Flow Meters

### Mini Anemometer



- Measures air velocity, volume flow and temperature
- m/s and m3/h (volume flow calculation 0 to 99,990 m3/h)
- 180 swivel head for easy measurement readings
- Telescopic extendible probe, up to 30cm
- Duct holder and multi-function clip for quick positioning  
Includes:- Duct holder, multi-function clip and battery

Accuracy	Range	Resolution
± (0.1 m/s ±5% of mv) (00 to +10 m/s- to +2m/s)		0.1°C
± (0.3 m/s ±5% of mv) (+2.1 to +10m/s)	-20 to +50°C	0.01 m/s

### Price Each

Order Code	Product Code	1+	4+
WX42051	05604053	£112.35	£109.09

### Anemometer



## AMPROBE

- Continuous moving average for up to 2 hours
- Long extended flexible cord for remote vane access
- MIN/MAX/AVG reading on a single point
- Measurement of rpm, speeds and lengths
- Air velocity average for multiple points
- Air flow average for multi-point
- Data hold of both readings
- Auto Power Off function (Bypass possible)
- RS232 interface output with optional software and cable
- Deluxe hard carrying case

Function	Range	Resolution	Accuracy
Air Velocity			
m/s (meters per sec)	0.40 m - 25 m/s	0.01 m/s	+/- 2%
ft/min (feet per minute)	125 ft - 4900 ft/min	1 ft/min	+/- 2%
Air Flow			
CMS (Cubic mtrs per sec)	0.01m - 99.99m(3)/sec	0.01	0 - 9.999 m
CFM (Cubic ft per min)	1 ft- 9999 ft(3)/min	1.0	0 - 9.999 ft
Air Temperature			
°C (°F)	0°C - 50°C (32-122°F)	0.1°C(°F)	+/-0.8°C (1.5°F)

### Price Each

Order Code	Product Code	1+	4+
WX38664	TMA10	£187.00	£180.97
WX38666	TM-SWA	£25.00	£24.19



## Large-Area Vane Anemometer



- The compact testo 417 anemometer with built-in flow/temperature vane Ø 100 mm to measure flow speed, volume flow and temperature
- Accurate volume flow calculation thanks to easy input of duct area
- In addition, it is easy to switch to the current temperature reading
- Timed and multi-point mean calculation provide information on mean volume flow, flow speed and temperature readings
- Min/max values can also be shown in the display
- Display light
- Built-in Ø 100mm vane

Storage temperature	-40 to +85 °C
Operating temperature	0 to +50 °C
Battery type	9V block battery 6F22
Battery life	50 h
Weight	230 g
Dimensions	277 x 105 x 45 mm

### Price Each

Order Code	Product Code	1+	4+
WX38693	05604170	£309.75	£300.77

‡ Special delivery applies. Please call for details

## Compact Thermal Anemometer



- The compact anemometer, testo 425, with permanently attached thermal flow probe and telescopic handle
- Volume flow is shown directly in the display. Exact volume flow calculation thanks to easy input of duct area
- You can also switch to the current temperature reading
- Multi-point and timed mean calculation
- Min/Max and Hold function included
- Timed and multi-point mean calculation provide information on mean volume flow, flow speed and temperature reading
- Display light

Storage temperature	-40 to +85 °C
Operating temperature	-20 to +50 °C
Battery type	9V block battery
Battery life	20 h
Weight	285 g
Dimensions	182 x 64 x 40 mm

### Price Each

Order Code	Product Code	1+	4+
WX42054	05604251	£393.75	£382.34

‡ Special delivery applies. Please call for details

## Wind, Air Flow, Temperature & Humidity



- Pocket sized measurement technology combining wind, air velocity, temperature and humidity measuring device in one unit.
- Integrated 40mm vane
- Times mean value calculation
- Windchill factor calculation for outdoor areas
- Measurement units include m/s, km/h, mph, fpm, beaufort and knots

**Testo 410-1** Wind or Air velocity and temperature

**Testo 410-2** Wind or Air velocity and temperature and humidity

Function	Range	Accuracy
Air Velocity: m/s (meters per sec)	0.4 to 20 m/s	± (0.2m/s + 2% of m.v)
Temperature	°C / °F	± 0.5°C
Humidity (Testo 410-2 only)	0 to 100%rh	± 2.5%

### Price Each

Order Code	Product Code	1+	4+
WX42052	05604101	£100.80	£97.88
WX42053	05604102	£156.45	£151.92

## Vane Thermo Anemometer



- Measures volume/velocity and temperature
- The remote vane thermo-anemometer measures air velocity, airflow volume and temperature
- This velocity/volume thermo-anemometer is rich in functions with data hold, min/max hold, averaging and memory for area sizes
- Excellent for ventilation surveys, air conditioning, heating and environmental monitoring
- Measures air velocity in m/s, ft/min, km/h, knots & mph
- Measures volume in m³/min (CMM) & ft³/min (CFM)
- °C/°F (switchable) temperature via a sensor in the centre of the vane
- Impact-resistant ABS case with detachable 64mm Ø vane on 1.1m cable
- 58mm backlit LCD display with large digits and function indicators
- Data hold & max/min functions
- Data hold & max/min hold for temperature
- Average multiple readings for velocity or flow volume for up to 20 readings
- Volume measurements by entering the area of the duct or grille being measured
- 16 memory locations for area sizes (8 CFM, 8 CMM)
- Auto off and low battery indicator
- Standard 1/4" camera bush for tripod mounting
- Supplied with hard carry case & battery

Range	m/sec	ft/min	mph	km/hr	knots	m³/min
						ft³/min
Minimum	0.4	80	0.9	1.4	0.8	0
Maximum	30	5900	67	108	58	999.90
Resolution	0.01	1	0.1	0.1	0.1	
Accuracy	±(3%+0.2+40)		+0.4	+0.8	+0.4)	
Temperature Range	-10 to +60°C, 14 to 140°F					
Accuracy	±2°C/±4°F					
Power	9V PP3 battery					
Dimensions	203 x 75 x 50mm					
Weight	425g					

### Price Each

Order Code	Product Code	1+	3+
WX43962 ‡	AVM-8893	£135.00	£129.60

‡ Special delivery applies. Please call for details

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## Hot Wire USB Logging Anemometer



- This hot wire thermal anemometer is ideal for low air velocity and volume measurement
- The slim plug in telescopic hotwire probe extends from 0.3m to 1m (inc handle) has a probe sensor head 9mmØ and is ideal for grill hoods and diffusers
- It is excellent for ventilation surveys, air conditioning, clean rooms, flow hoods, air balancing and environmental monitoring. USB interface for real time transfer of readings to a PC.
- 0.1 to 25m/sec x 0.01
- Measures air velocity in m/s, ft/min, km/h, knots & mph
- Measures air volume in m3/min or f3/min
- Measures temperature °C, °F
- 58mm LCD display with Backlight and function indicators
- Data Hold & Min/Max for airflow and temperature
- Low Battery indicator
- Auto Power Off, can be user disabled
- USB interface for real time transfer of readings to a PC
- Mean point (average) over displayed elapsed time
- Standard 1/4" camera bush for tripod mounting
- Supplied with USB connection cable, software, hard carry case, telescopic hot wire probe & battery
- Dimensions 210 x 75 x 50mm unit 0.3 x 1m probe

Range	m/sec	ft/min	mph	km/hr	knots	m³/min ft³/min
Minimum	0.1	20	0.2	0.3	0.2	0
Maximum	25	4925	55.8	90	48.5	999.90
Resolution	0.01	1	1	0.1	0.1	
Accuracy	±5%					
Temp	0 to 50°C,					
Range	32 to 122°F					
Accuracy	1°C/1.8°F					
Power	9V PP3 Alkaline Battery					

Price Each

Order Code	Product Code	1+	3+
WX53556 ‡	AVM-8880	£195.00	£187.20

‡ Special delivery applies. Please call for details

- The Ultraprobe® 100 is a practical tool for leak detection
- Detects the ultrasound created by compressed air/gas leaks
- Use whilst plant in full operation
- Detect faulty steam traps
- Ultrasound is very directional
- Eight position sensitivity dial
- Bar graph display
- Supplied with headphones and carry case
- Warrantied for five years
- Other models available including ATEX

Air leaks in industry are costly with around 30% of all the air produced in the UK is wasted as leaks. Generation of compressed air equates to 10% of the total industrial electricity used and just one 3mm hole could be costing over £600 a year in wasted energy. Ultraprobe equipment can effectively reduce your energy bills by locating and engineers fixing air leaks.

Price Each

Order Code	Product Code	1+
WX43963 ‡	ULTRAPROBE-100SC	POA

‡ Special delivery applies. Please call for details

## Ultraprobe 3000 - Digital



- Ultraprobe that's versatile enough to cut energy waste and improve uptime while saving money, and improving the environment!
- Detects the ultrasound created by compressed air/gas leaks
- Digital display – db reading
- 400 memory locations
- Supplied with software to cost leaks
- Rechargeable battery
- Used whilst plant in full operation
- Ultrasound is very directional
- Detect faulty steam traps
- Supplied with headphones and carry case

Price Each

Order Code	Product Code	1+
WX43964 ‡	ULTRAPROBE-3000	POA

‡ Special delivery applies. Please call for details

## CygScope R & RD - Ultrasonic Listening Device



- 2 Models of the CygScope
- CygScope R is a analogue ultrasonic listening device
- Detects leaks that cost money easily, quickly and accurately
- Simple to use, low cost yet reliable system to reduce your energy

costs effectively and dramatically

- Ideal for:
  - Compressed air or vacuum systems
  - Steam traps
  - Motor and rail vehicles - testing seals in cabin doors/boot/trunk
  - Checking leaks in cold storage tanks
  - Check fuel injection in diesel engines
- Specification details:
  - Operation Frequency Approx 40 KHz
  - Display LED 10 step Scale
  - Rechargeable batteries with charger approx 10 hours
  - Operating temperature -10 +50C
  - Environmental Protection IP20
  - Kit comes with Cyscope R
  - Ultrasonic Air Probe C50
  - Flexible cable for probe
  - Battery charger
  - High quality headphones
  - Directional probe
  - Transport case
  - Protective leather case
- CygScope R is a digital ultrasonic listening device
- Detects leaks that cost money easily, quickly and accurately
- Simple to use, low cost yet reliable system to reduce your energy costs effectively and dramatically
- Ideal for:
  - Compressed air or vacuum systems
  - Steam Traps
  - Motor and rail vehicles: testing seals in cabins doors/boot/trunk
  - Cold storage tanks
  - Check fuel injection in diesel engines
- In Industry this product is used to verify steam pipe seals, seal integrity or fittings and condenser drains
- Searching for faults in electrical insulation
- Used in conjunction with contact probe can be used to in predictive maintenance of potential wear on rotating parts and bearing wear
- Specification details:
  - Operation Frequency Approx 40 KHz
  - Digital display on LCD with back light also LED 10 step scale
  - Rechargeable batteries with charger approx 10 hours
  - Operating temperature -10 +50C
  - Environmental Protection IP20
  - Kit comes with CygScope R
  - Ultrasonic Air Probe C50
  - Flexible cable for probe
  - Battery charger
  - High quality headphones
  - Directional probe
  - Transport case
  - Protective leather case

Price Each

Order Code	Product Code	1+
WX53574	009-7421/R Cygscope R	£1,435.00
WX53575 ‡	009-7422/RD Cygscope RD	£2,030.00

‡ Special delivery applies. Please call for details

## Ultrasonic Leak Detector TMSU 1



## Air Leak & Steam Trap Checker

### Ultraprobe 100 - Analogue





The TMSU 1 is suitable for detecting, tracing and diagnosing the source of all kinds of leaks, such as compressed air, gases, steam and vacuum systems. It can also be used to verify the correct operation of steam traps. It works like a microphone, but is sensitive only to high frequency ultrasound. The sensor transforms then the ultrasound into an audible frequency that can be heard through the headphones. The sensitive piezoelectric crystal in the sensor allows the end user to quickly guide the instrument to the loudest point which helps locate the leak location.

- Controls; Continuous or non-continuous operation switch. Silicone rubber button to control stop-start non-continuous operation and volume adjustment
- Amplification; 7 levels; 20, 30, 40, 50, 60, 70 and 80 dB
- Ultrasound Sensor; Open sensor with a 16 mm (1/2 in Ø) diameter (19 mm – 3/4 in Ø – exterior), central frequency of 40kHz
- Detected frequencies; 38,4 kHz,  $\pm 2$  kHz (-3 dB)
- Audio output; Stereo jack connector of 6,35 mm (1/4 in) (use only the headset supplied with the unit)
- Power; Two alkaline AA batteries, 1.5 V. Rechargeable batteries can also be used but the usage time will be reduced
- Usage time;  $\pm 20$  hours. This varies based on: including the charge of the battery in the detector, the level of amplification used and the quality of the batteries
- Body; Made with machined and assembled sheets of high impact polystyrene, shock resistant
- Dimensions; Body: 170 x 42 x 31 mm (6,70 x 1,65 x 1,22 in), flexible tube length: 400 mm (15,75 in)
- Weight; 412 grams with the batteries (14,53 oz)
- Operating temperature range; From -10° C to + 50° C / 14° F to 122° F

Price Each

Order Code	Product Code	1+
WX51151 ‡	TMSU-1	£861.33

‡ Special delivery applies. Please ask for details

#### Ultrasonic Leak Detection System and Stethoscope



- The UltraPro AG500 is a powerful ultrasonic leak detector and electronic stethoscope
- The system is used in construction, maintenance and manufacturing wherever precision gaseous leak detection or diagnostics are required
- UltraPro uses ultrasound technology to sense frequencies ranging from 18 to 42 kHz, which are converted into an audible sound
- The system is used to locate leaks in any gaseous system and to troubleshoot moving assemblies such as bearings, injectors, solenoids and valves
- UltraPro features a unique automatic gain control which filters the signal to provide the best signal-to-noise ratio, suppressing background noise and pinpointing leaks.
- The AG circuit simplifies operation, removing complicated adjustment knobs and filter switches
- UltraPro offers superior electronics with rugged industrial packaging and a protective rubberized case
- **Features:**
  - Simple operation
  - 10 element LED bar-graph display
  - Industrial rubber holster
  - Air and contact probes
  - Audio output with volume control
- **Common UltraPro Applications:**
  - Steam Traps
  - Vacuum/Air Leaks
  - Bearings/Valves
  - Pressure Leaks
  - Water Leaks
- **Specification**
  - Power: 9volt Battery
  - Battery Life: (typical) 20 hrs (continuous)
  - Displays: 10 element LED bar-graph.
  - Frequency Response: (kHz) 36-44
  - Audio Output: (kHz) 0 to 4
  - Construction: ABS and anodised aluminum with rubber holster
  - Dimensions: (mm) 150 x 100 x 38
  - Weight (g) 300

Price Each

Order Code	Product Code	1+
WX53609 ‡	ULTRAPRO-AG500	£718.77

‡ Special delivery applies. Please ask for details

## Gas Monitoring

### C090 Carbon Monoxide Meter



- A rapid responding carbon monoxide meter, ideal for checking safety
- A beeper gives audible indication, speeding up with CO concentration and becoming a continuous tone above 200 ppm.
- Max and Hold buttons allow one reading (or the highest) to be displayed over a period of time.
- Display: 3 1/2 digit liquid crystal display (LCD) with maximum reading of 1999 ppm
- Operating Environment: 0°C to 40°C (32°F to 105°F) at 15% to 90% relative humidity
- Storage Temperature: -20°C to 60°C (-4°F to 140°F), 0 to 80% R.H. with battery removed from meter
- Response Time: <70 sec to 90% of reading
- Initial Accuracy:  $\pm 5\%$  of reading  $\pm 5$ ppm
- Average Measurement Capacity: (A reading is taken every 7 seconds and displays the average on screen)

- Normal Measurement Capacity: (current reading shown on screen)
- Supply: Standard 9V battery (PP3, NEDA 1604, IEC 6F22 006P) (included)
- Low battery indication
- Dimensions: 189 x 67 x 35mm
- Weight: 193g approx incl battery

Price Each

Order Code	Product Code	1+	3+
WX60968	C090	£128.09	£122.97

## Pressure Meters

### Differential Pressure Measurement



- Measuring range of 0 to 100 mbar
- Temperature compensation
- Magnetic base for hands free instrument mounting
- Flow velocity measurement
- Air density compensation

#### Includes:-

Batteries (AAA x 2)  
Wrist strap  
Belt holder  
Protective Cap  
Dimensions (inc cap) 119x46x25mm

Accuracy

$\pm 0.03$  mbar (0 to 0.30mbar)

$\pm 0.05$  mbar (0.31 to 1 mbar)

$\pm (0.1 \text{ mbar} + 1.5\% \text{ of m.v.})$

(1.01 mbar to 100 mbar)

Units

hPa, mbar, Pa, mmHg  
0, mmHg, inH  
0, psi, m/s, fpm

Price Each

Order Code	Product Code	1+	4+
WX42047	05600510	£128.10	£124.39

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Test & Measurement



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Test & Measurement 2063





- Absolute pressure accuracy  $\pm 3$  mbar
- Calculation of barometric pressure
- Barometric altitude measurement

**Includes:-**

- Batteries (AAA x 2)
- Wrist strap
- Belt holder
- Protective Cap
- Calibration protocol

Dimensions (inc cap) 119x46x25mm

Measuring range: 300 to 1,200 mbar Accuracy:  $\pm 3.0$  mbar

Units: hpa, mbar, Pa, mmHg,  
0, mmHg, inHg,  
0, psi, m, ft

Price Each

Order Code	Product Code	1+	4+
WX42048	05600511	£156.45	£151.92

## Measuring Tools

### Calibration Available



- Calibration is an essential part of the activities of any company if quality control is taken seriously
- Measurement to a consistently high level of accuracy can only be achieved if instruments are periodically calibrated against traceable standards
- Brammer can provide pre-UKAS calibration certification on many newly purchased products to meet this requirement in our supplier's environmentally controlled calibration laboratories
- So where you see the above logo featured on certain products; Brammer can offer a fully calibration certified version of that product

## Books

### Reference

#### Zeus precision charts



## Roebuck NEW

- Revised metric edition
- Covers and all pages have a plastic finish, so that they will not pick up dirt, oil, etc easily
- Contains data charts and reference tables for all engineering trades

Price Each

Order Code	Product Code	1+	6+
WX60969	231801	£4.71	POA

## Rules, Tapes and Measures

### Rules

#### Standard steel rules



## Roebuck NEW

- EC class 1
- Manufactured from fine quality steel, hardened and tempered with a satin finish
- "D" end
- Graduated both sides
- Front 16ths, 32nds, 64ths, 10ths, 20ths, 50ths and 100ths
- Reverse side 0.5 and 1.0 millimetres to BS 4372/1968

Price Each

Order Code	Product Code	Length	Width	1+	6+
WX60970	233620	150mm / 6"	19mm / 3/4"	£4.48	£4.26
WX60971	233621	300mm / 12"	25mm / 1"	£7.76	£7.37

#### Metric/English steel rules



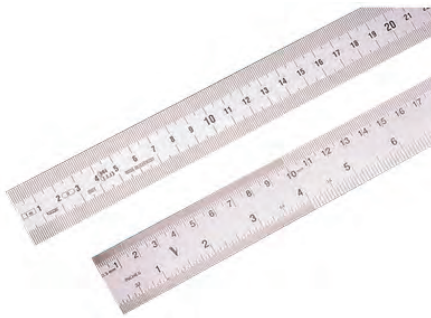
## Roebuck NEW

- EC Class 2
- Top edge: 0.5mm and 1mm, figured in cm
- Bottom edge: 16ths, 32nds, 64ths, figured in inches

Price Each

Order Code	Product Code	Length Metre	Length Inches	Width x Thickness	1+	6+
WX60972	032125	1 m	40 "	30 x 1 mm	£44.20	£41.99
WX60973	032126	1.5 m	60 "	30 x 1 mm	£88.16	£83.75
WX60974	032127	1.5 m	60 "	40 x 2 mm	£146.19	£138.88
WX60975	032128	2 m	80 "	30 x 1 mm	£89.58	£85.10

#### Metric steel rules



## Roebuck NEW

- EC Class 2
- Both edges: 1mm, figured in cm

Price Each

Order Code	Product Code	Length	width x Thickness	1+	6+
WX60976	032120	1 m	30 x 1 mm	£46.59	£44.26
WX60977	032121	1.5 m	30 x 1 mm	£72.16	£68.55
WX60978	032122	1.5 m	40 x 2 mm	£154.10	£146.40
WX60979	032123	2 m	30 x 1 mm	£103.33	£98.16
WX60980	032124	2 m	40 x 2 mm	£200.38	£190.36

#### Metric square end rules



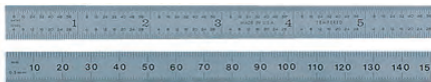
## Roebuck NEW

- Manufactured from high quality steel and fully hardened and tempered with a non-glare satin chrome finish
- Graduations etched from precise glass masters for repeated accuracy
- Specifications: Rules graduated both sides: 1.0mm & 0.5mm
- Conform to EEC-Class
- Rigid and 1.0mm thick

Price Each

Order Code	Product Code	Length	Width	1+	6+
WX60981	2017359	150 mm	19 mm	£7.21	£6.85
WX60982	2017360	300 mm	25 mm	£13.38	£12.71
WX60983	2017361	450 mm	29 mm	£22.22	£21.11
WX60984	2017362	600 mm	29 mm	£31.79	£30.20
WX60985	2017363	1000 mm	32 mm	£87.67	£83.29

#### English metric square end rules



## Roebuck NEW

- Square end rules are manufactured from hardened and tempered high quality British steel and conform to BS 4372-1968 for accuracy
- Etched from precise glass masters with satin chrome finish and blackened graduations for wear resistance and non-glare viewing
- Front sidemarked 64ths and 32nds figured in inches
- Reverse side marked in 1.0mm and 0.5mm

Price Each

Order Code	Product Code	Description	1+	6+
WX60986	030550	150mm / 6in	£7.23	£6.87
WX60987	030551	300mm / 12in	£11.72	£11.13
WX60988	030552	450mm / 18in	£20.72	£19.68
WX60989	030553	600mm / 24in	£29.93	£28.43
WX60990	030554	900mm / 36in	£88.75	£84.31

## Black chrome rules



## Roebuck NEW

- Manufactured from high quality British steel
- The rulers are hardened and tempered and have a satin chrome finish for durability and non-glare viewing
- "D" End style
- All rules are supplied in individual plastic wallets
- Front side is graduated in 10ths, 16ths, 20ths, 32nds, 50ths and 100ths
- reverse side graduated in 0.5mm and 1.0mm

Price Each

Order Code	Product Code	Length	Width	1+	6+
WX60991	030144	15 mm / 6"	19 mm	£6.66	£6.33
WX60992	030145	300mm / 12"	25 mm	£11.44	£10.87

## Tin coated steel rules



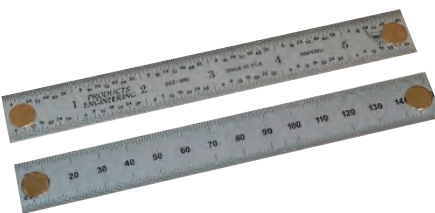
## Roebuck NEW

- Titanium nitride coated, RC80 hardness, for exceptional wear and visibility
- Long lasting, hard wearing, non-glare finish
- Scratch resistant microfine graduations with excellent clarity and contrast, 30% harder than standard

Price Each

Order Code	Product Code	Length	Width	1+	6+
WX60993	030146	150mm / 6"	19 mm	£15.08	£14.33
WX60994	030147	300mm 12"	25 mm	£26.57	£25.24

## Magnetic steel rules



## Roebuck NEW

- Magnetic rules contain encapsulated button magnets and are suitable for fixing to machine slides, guillotine blades and sheet metal
- Manufactured from hardened and tempered high quality British steel, they conform to BS 4372-1968 for accuracy
- Etched from precise glass masters with satin chrome finish and blackened graduations for wear resistance and non glare viewing
- Front side marked 64ths and 32nds: figured in inches
- Reverse side marked 1.0mm and 0.5mm: figured in millimetres

Price Each

Order Code	Product Code	Description	1+	6+
WX60995	030458	150mm / 6in	£16.51	£15.68
WX60996	030459	300mm / 12in	£33.32	£31.65
WX60997	030460	600mm / 24in	£63.14	£59.98
WX60998	030461	900mm / 48in	£132.90	£126.26
WX60999	030469	1200mm / 48in	£222.95	£211.80

## Stainless Steel Rules

### Metric

#### Metric/Imperial Steel Rules



- Metric and Imperial Steel Rules
- Flexible and rigid options in 150mm and 300mm options
- 1mm Graduation

Price Each

Order Code	Product Code	Description	1+	3+
WX20343	182-105	150mmx-19mm, Rigid	£6.83	£6.63
WX20344	182-125	300mmx-25mm, Rigid	£13.13	£12.74
WX20345	182-205	150mmx-12mm, Flexible	£6.83	£6.63
WX20346	182-225	300mmx-12mm, Flexible	£11.87	£11.51

#### Stainless Steel Individual Rules



- Precision rule manufactured from hardened stainless steel matt chrome plated
- Permanently etched black graduations for long service life
- Metric and imperial measurements
- Supplied in vinyl wallet

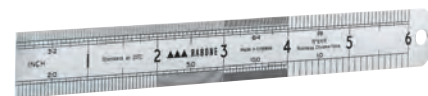
Price Each

Order Code	Product Code	Description	1+	6+
WX20783	12613	150mm	£4.10	£3.86

Length: 150 mm, Graduation: 0.5 mm, Range: 150mm

## Rustless Steel Rules

#### Metric and Imperial Rustless Steel Rule

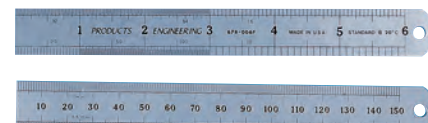


- Engineers precision steel rule
- Fully graduated in metric and imperial sizes
- Class 1 equivalent
- Metric: 0.5mm
- Imperial: 16ths/32nds/64ths/10ths/20ths/50ths/100ths

Price Each

Order Code	Product Code	Description	1+	10+
WX21066	0-35-400	150mmx19mm	£6.82	£6.44
WX21067	0-35-401	300mmx25mm	£11.48	£10.84
WX21068	1-35-402	600mmx25mm	£22.38	£21.14
WX21069	0-35-406	1000mmx25mm	£28.87	£27.27
WX21070	0-35-432	150mmx12.5mm	£6.82	£6.44
WX21071	0-35-433	300mmx12.5mm, flexi	£11.48	£10.84

## Metric/Imperial Steel Rules



- Rules conform to BS 4372-1968
- Satin chrome finish offers non-glare viewing and resistance to wear
- Front side: Top scale: 10ths, 20ths, 50ths, 100ths. Figured in inches
- Front side: Bottom scale: 16ths, 32nds, 64ths. Figured in inches
- Reverse side: Top scale: 1.0mm. Figured in millimetres
- Reverse side Bottom scale: 0.5mm. Figured in millimetres

Price Each

Order Code	Product Code	Description	1+	3+
WX31800	678-006F	150x19mm	£6.84	£6.48
<b>Type: Rigid</b>				
WX31801	678-012	300x25mm	£11.59	£10.98
<b>Type: Rigid</b>				
WX31802	678-024	600x29mm	£33.44	£31.68
<b>Type: Rigid</b>				
WX31804	851-006F	150x12.5mm	£6.94	£6.57
<b>Type: Flexible</b>				
WX31805	851-012F	300x12.5mm	£11.59	£10.98
<b>Type: Flexible</b>				

## Straight Edges

### Graduated



## Roebuck NEW

- A range of general purpose carbon steel straight edges
- Graduated in mm's on bevel edge

Price Each

Order Code	Product Code	Length	Width x Thickness	1+	6+
WX61000	031559	500 mm	40 x 5 mm	£57.05	£54.20
WX61001	031560	1000 mm	40 x 5 mm	£110.01	£104.51
WX61002	031561	2000 mm	40 x 5 mm	£237.68	£225.80

### General purpose straight edge

#### Ungraduated

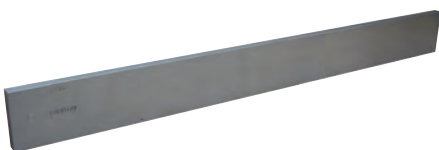


## Roebuck NEW

- A range of general purpose carbon steel straight edges

Order Code	Product Code	Length	width x Thickness	Price Each	
				1+	6+
WX61003	031555	500 mm	40 x 5 mm	£38.10	£36.20
WX61004	031556	1000 mm	40 x 5 mm	£73.10	£69.45
WX61005	031557	1500 mm	40 x 5 mm	£114.82	£109.08
WX61006	031558	2000 mm	40 x 5 mm	£151.16	£143.60

### Straight Edges



- Steel straight edges manufactured to DIN 874
- Marked with supporting points on side face
- Both working surfaces & side faces are fine ground
- Each straight edge is individually serialised

Order Code	Product Code	Description	Price Each	
			1+	2+
WX41989	59-010-050	500x30x6mm	£49.02	£46.44
WX41990	59-010-075	750x40x8mm	£77.90	£73.80
WX41991	59-010-100	1000x40x8mm	£95.95	£90.90
WX41992	59-010-150	1500x50x-10mm	£190.00	£180.00
WX41993	59-010-200	2000x60x-12mm	£253.65	£240.30

### Tapes

### Tape Measures Short Series

#### Hi-vis tape measures



## Roebuck NEW

- Distinct high visibility colour makes it easier to find on-site
- Compact design for ease of use
- Durable impact resistant case with tape return bumper
- Tylong coated blade to ensure superior wear resistance compared to standard lacquered blades
- True zero end hook attached by 2 rivets
- Handy carrying strap and belt clip included
- Class II accuracy

Order Code	Product Code	Colour	Length	Width	Price Each	
					1+	6+
WX61007	231707	Green	5m/16'	19 mm	£3.38	£3.21
WX61008	231708B	Orange	5m/16'	19 mm	£3.38	£3.21

#### Workshop tape measures



## Roebuck NEW

- Compact design for ease of use
- Durable impact resistant case with tape return bumper
- Tylong coated blade to ensure superior wear resistance compared to standard lacquered blades
- 25mm wide blade option stands out over 2m
- True zero end hook attached by 2 rivets
- Handy carrying strap and belt clip included
- Class II accuracy

Order Code	Product Code	Length	Width	Price Each	
				1+	6+
WX61009	231690	3m/10'	13 mm	£2.20	£2.09
WX61010	231695	5m/16'	19 mm	£3.70	£3.52
WX61011	231696	8m/26'	25 mm	£7.00	£6.65

#### Professional tape measures



## Roebuck NEW

- Chrome plated, impact resistant plastic case with tape return bumper
- Compact design for ease of use
- Tylong coated blade to ensure superior wear resistance compared to standard lacquered blades
- 25mm blade option stands out over 2m
- True zero end hook attached by 2 rivets
- Handy carrying strap and belt clip included
- Class II accuracy

Order Code	Product Code	Length	Width	Price Each	
				1+	6+
WX61012	231697	3m/10'	13 mm	£5.20	£4.94
WX61013	231699	5m/16'	19 mm	£8.00	£7.60
WX61014	231700	8m/26'	25 mm	£12.20	£11.59
WX61015	231706	10m/33'	25 mm	£14.00	£13.30

#### Soft grip tape measures



## Roebuck NEW

- All round grip for extra control and durability
- Tape return bumper
- Tylong coated blade to ensure superior wear resistance compared to standard lacquered blades
- 25mm wide blade option stands out over 2 metres
- True zero end hook attached by 2 rivets
- Handle carry strap and belt clip
- Class II accuracy

Order Code	Product Code	Length	Width	Price Each	
				1+	6+
WX61016	231728	5m/16'	19 mm	£4.00	£3.80
WX61017	231729	8m/26'	25 mm	£7.50	£7.13

#### Measuring Tapes



## Roebuck NEW

- Stainless Steel Case plus black Rubber
- Two Stops
- Magnetic Tip
- MID Blade (11)
- Nylon Coated Blade
- Cloth Wrist Strap

Order Code	Product Code	Tape Length	Price Each	
			1+	6+
WX61018	2521608	3 Metre	£6.60	£6.27
WX61019	2521609	5 Metre	£9.50	£9.03
WX61020	2521610	8 Metre	£15.10	£14.35

### Tape Measures

#### Magnetic Tip Stainless Steel Tape Measures



- The top models of pocket tape measures are fitted with a magnetic tip and have an anti-reflective coating on the scale for precise reading
- The Bahco MTS is also made entirely of rust-proof materials so that it can be used in harsh environments
- Bahco's new tape measures, the company's first ever, are aimed at professionals
- Many of Bahco's measuring tapes have graduations on both sides of the blade for precise reading of the scale in all situations and the magnetic tip makes building work with metal structures, for example, easier
- You only need to attach the tip to a metal frame and then pull the tape out to the other measurement point
- It is also possible to pick up lost metallic objects such as screws and the like that have been dropped using the tape's magnetic tip
- The blade is also stable when being pulled out thanks to its much greater width
- The new tape measures are of "Bahco class" and have many new and innovative features which stand out
- Automatic blade locking for quick and easy measuring
- Fingertip, sensitive control for blade retraction
- Blade width 25mm

Order Code	Product Code	Description	Price Each	
			1+	6+
WX45614	MTS-5-25-E	5M	£21.55	£20.28
WX45615	MTS-8-25-E	8M	£26.61	£25.05



## Tape Measures



### STANLEY

- Rubber over-moulded strip for comfort and grip
- High impact ABS housing for strength and durability
- Forward slide lock mechanism
- Versatile Tru-Zero end hook with 2 and 3 rivet assembly
- Nylon coated blade
- Tape sizes:
  - 3m tape: (10ft) x 12.7mm
  - 5m tape: (16ft) x 19mm
  - 8m tape: (26ft) x 25mm

#### Price Each

Order Code	Product Code	Description	1+	6+
WX39944	0-30-686	3m (10ft)	£3.20	£3.02
WX35184	0-30-696	5m (16ft)	£5.04	£4.76
WX35182	0-30-656	8m (26ft)	£9.63	£9.10

## Standard Tape Measures



### IRWIN Industrial Tools

NEW

- Plastic case with Pro-Touch grip
- Sliding lock
- Acrylic coated blade
- blade Stand out 3m/10ft 1.2m
- Blade Stand out 5m/16ft 1.8m
- Blade Stand out 8m/26ft 2.3m

#### Price Each

Order Code	Product Code	Blade Length	Blade Width	1+	6+
WX61021	10508055	3m/10ft	13mm	£2.36	£2.22
WX61022	10508056	5m/16ft	19mm	£3.82	£3.59
WX61023	10508057	8m/26ft	25mm	£7.69	£7.24

Also see our Power Tools section



## Softech Tape



- Soft, comfortable outer casing
- Pause button on rear for easy control
- Hard wearing nylon coated blade
- Wide blade for great stand out
- Tape sizes:
  - 5m tape: (16ft) x 19mm
  - 7.5m tape: (25ft) x 25mm

#### Price Each

Order Code	Product Code	Description	1+	4+
WX35093	T3442-16	5m Tape	£5.66	£5.33
WX35094	T3442-25	7.5m Tape	£9.77	£9.19

## Professional Tape Measures



### IRWIN Industrial Tools

NEW

- Plastic case with full Pro-Touch grip
- Fast lock blade hold
- Nylon coated blade
- 2x life of Standard Irwin blade coating
- Double sided Imperial/Metric blade print
- Hook magnets
- Extended length of hook panel for durability

- Blade Stand out 3m/10ft 1.4m
- Blade Stand out 5m/16ft 1.8m
- Blade Stand out 8m/26ft 2.3m

#### Price Each

Order Code	Product Code	Blade Length	Blade Width	1+	6+
WX61024	10507793	3m/10ft	16mm	£5.70	£5.37
WX61025	10508062	5m/16ft	19mm	£9.73	£9.16
WX61026	10508063	8m/26ft	25mm	£11.43	£10.76

## Tuf-Lok Measuring Tapes



## FISCO

- Tough, ergonomic case with rubber-like outer casing
- Positive action brake
- Automatic blade return with snake-spring bump stop for added blade and end-hook protection
- Detachable belt clip
- Self-zeroing end-hook
- Belt clip
- Fisco products are made in the UK

#### Price Each

Order Code	Product Code	Description	1+	6+
WX45617	FISCO-TKC3ME	3m/10ft	£3.15	£2.97
WX45618	FISCO-TKC5ME	5m/16ft	£5.71	£5.38
WX45619	FISCO-TKC8ME	8m/26ft	£9.55	£8.98

## Powerlock BladeArmor™



### STANLEY

- BladeArmor™ coating on the first 6" maximizes durability of hook end
- Chrome plated die-cast case
- Entire blade coated with Mylar® polyester film for added durability
- True zero hook - compensates accurately for internal and external measurements
- Three-rivet, corrosion-resistant hook moves for accurate inside/outside measurements - 40% stronger than a 2 rivet hook construction
- Forward blade lock design simplifies locking and unlocking the blade
- Class II accuracy
- Positive blade lock
- Belt clip

#### Price Each

Order Code	Product Code	Description	1+	6+
WX38689	0-33-526	8m (26ft)	£13.40	£12.66

## Powerlock Tapes



### STANLEY

- Chrome plated plastic case
- Positive easy locking
- Mylar coated blade for long life
- Tru-Zero hook for accurate readings
- Supplied complete with belt clip
- Tapes give metric and imperial readings
- Class II accuracy
- Tape sizes:
  - 3m Tape: (10ft) x 12.7mm
  - 5m Tape: (16ft) x 19mm
  - 10m Tape: (33ft) x 25mm

#### Price Each

Order Code	Product Code	Description	1+	6+
WX42015	0-33-523	3m Tape	£5.86	£5.53
WX43975	0-33-553	5m Tape	£10.06	£9.50
WX21053	0-33-443	10m Tape	£15.92	£15.04

## Professional Measuring Tapes



### DRAPER

- Tough impact resistant satin chrome plated case
- Large positive blade locking button and belt clip
- Power return nylon coated blade
- Tape sizes:-
  - 3m tape: (10ft) x 13mm
  - 5m tape: (16ft) x 19mm
  - 7.5m tape: (25ft) x 25mm
  - 9m tape: (29ft) x 25mm

#### Price Each

Order Code	Product Code	Description	1+	6+
WX30802	55813	3m Tape	£4.95	£4.66
WX30803	55814	5m Tape	£7.28	£6.85
WX30804	55815	7.5m Tape	£12.61	£11.87
WX30804	36016	9m Tape	£12.61	£11.87

## XP Tape Measures



### IRWIN

NEW

- Plastic case with full Pro-Touch grip & steel side panels for added protection
- Fast lock blade hold
- Nylon sleeved blade
- 20x life of Standard Irwin blade coating
- Double sided Imperial/Metric blade print
- Double hook
- Extended length of hook panel with 3 rivets for durability

- Blade Stand out 5m/16ft 2.3m
- Blade Stand out 8m/26ft 2.5m

#### Price Each

Order Code	Product Code	Blade Length	Blade Width	1+	6+
WX61027	10507800	5m/16ft	25mm	£13.97	£13.15
WX61028	10507801	8m/26ft	27mm	£19.22	£18.09

## FatMax - BladeArmour



### STANLEY FatMax

- Extra wide blade - 32mm gives up to 3.35m (11 ft) of 'stand out' for easy reading
- 'BladeArmour' Industrial Coating for maximum durability
- Impact resistant cushion grip
- Multi-function hook grabs on the side, top and bottom
- 3 Rivet end hook - 40% stronger than a 2 rivet hook
- Tru-Zero compensates for accurate internal or external measurements
- Mylar coated blade for long life - greater abrasion resistance
- Positive Blade lock
- Tape gives metric and imperial readings
- Class II accuracy
- Tape sizes:
  - 5m Tape: (16ft) x 32mm
  - 8m Tape: (26ft) x 32mm

#### Price Each

Order Code	Product Code	Description	1+	4+
WX21058	0-33-719	5m Tape	£16.12	£15.22
WX21059	0-33-726	8m Tape	£19.70	£18.61

## Measuring Tapes



### DRAPER

- Tough impact resistant ABS case with soft grip, blade locking button and belt clip
- Hold and measure button allows user to lock tape for accurate measurements with button on base to control speed of return blade into tape
- Power return nylon coated blade has clear black and red graduations, metres into cm/mm and feet into inches, 1/8" and 1/16"
- Yellow wear resistant coating
- Stud centre markings every 16"
- Self-aligning end hook for very accurate internal/external measurements
- Tape Sizes:
  - 3m Tape: (10ft) x 16mm
  - 5m Tape: (16ft) x 19mm
  - 7.5m Tape: (25ft) x 25mm

#### Price Each

Order Code	Product Code	Description	1+	6+
WX38626	75300	7.5m Tape	£8.72	£8.21
WX38625	75299	5m Tape	£6.77	£6.37
WX38624	75298	3m Tape	£4.57	£4.30

## Measure Stix™ Steel Measuring Tape with adhesive backing



### Starrett

- Tape measure sticks to almost any work surface for convenient, at-a-glance measurements
- High quality precision steel rule is flat with permanent adhesive back
- Cut to size with scissors
- Mount on workbenches, saw tables, drafting tables, etc

#### Price Each

Order Code	Product Code	Description	1+	5+
WX43976	SM44ME	1/2" x 4' (13 mm x 1.2 m)	£3.91	£3.69
WX43977	SM412ME	1/2" x 12' (13 mm x 4 m)	£5.01	£4.73
WX43978	SM66ME	3/4" x 6' (19 mm x 2 m)	£4.46	£4.21

## Fisco - Big T™



### FISCO

- Innovation at its very best FISCO have developed a new generation of measuring tapes that sets new standards in design and technology
- Rubber protection at all potential impact points, and a patented internal shock absorber
- Easy inside measurements, case size makes add-ons easy
- Plus cursor shows the precise reading
- Unique snap-in belt holster. Holds tape securely, and quick to release
- Ergonomic shape feels moulded to your hand and is great to use
- Superior brake control - minimum effort with maximum holding power
- Clear-view end-hook - read the scale right up to the tip
- Integrated buffer on tape protects tip against damage
- Two blade widths 19mm and 25mm showing imperial and metric measurements. Metric options are also available

#### Price Each

Order Code	Product Code	Description	1+	4+
WX43979	BT5ME	5m/16ft - 19mm blade	£10.41	£9.80
WX43980	BT8ME	8m/26ft - 25mm blade	£14.08	£13.26



## Long Measuring Tapes

### Open frame tapes



## Roebuck NEW

- Measuring tape with PVC coated glass fibre blade
- Flexible and extremely strong
- Rust free, rot proof and water resistant to most common chemicals
- Electrically non-conductive when dry
- Graduated on both sides
- Imperial on one side and metric on the other
- Folding winder handle
- Frame constructed from strong black ABS which is extremely tough and impact resistant

#### Price Each

Order Code	Product Code	Length	Width	1+	6+
WX61029	231704	30m/100'	13 mm	£10.20	£9.69
WX61030	231705	50m/165'	13 mm	£19.01	£18.06

### Closed case tape



## Roebuck NEW

- Measuring tape with PVC coated glass fibre blade
- Flexible and extremely strong
- Rust free, rot proof and water resistant to most common chemicals
- Electrically non-conductive when dry
- Graduated on both sides
- Imperial on one side and metric on the other
- Folding winder handle
- Strong steel coated case
- Hand strap fitted to 30m tape only

#### Price Each

Order Code	Product Code	Length	Width	1+	6+
WX61031	231701	10m/33'	13 mm	£16.70	£15.87
WX61032	231702	20m/66'	13 mm	£24.14	£22.93
WX61033	231703	30m/100'	13 mm	£25.89	£24.60

### Open Fibreglass Tapes



## STANLEY

- 26 strand 12mm wide blade
- Crystal clear graduations on an easy clean surface
- Metric and imperial blade printed both sides
- Bi-material handle and shaped winder for ease of use
- Class III accuracy
- Tape size 30M (100ft) x 12.7mm

#### Price Each

Order Code	Product Code	Description	1+	4+
WX21064	2-34-791	30m Tape	£16.87	£15.93

### Closed Fibreglass Tapes



## STANLEY

- 26 strand 12mm wide blade
- 2 colour graduations allowing easy reading
- High impact ABS case
- Folding handle for storage
- Class III accuracy
- 30m tape: (100ft) x 12.7mm

#### Price Each

Order Code	Product Code	Description	1+	6+
WX21063	0-34-262	30m (100')	£11.10	£10.48

### Fisco - Euromet



## FISCO

- Professional grade, high specification steel surveying tape, constructed to withstand heavy use
- Corrosion resistant steel case
- Whitecote polyester coated steel tape
- High impact polymer centre
- Corrosion resistant winding lever
- Corrosion resistant end-piece
- Hand strap on 50m models
- 10, 20, 30 & 50 metre metric scale models are also available

#### Price Each

Order Code	Product Code	Description	1+	4+
WX43981	EX30/14	30m/100ft	£29.24	£27.52
WX43982	EX50/15	50m/165ft	£39.75	£37.41

### Fisco - Pacer



## FISCO

- Heavy duty, high specification open frame tape designed for the professional user
- Impact resistant moulded ABS frame with ground spike
- Whitecote polyester coated steel tape
- High impact polymer centre
- Low friction bearing for smooth rewind
- Long winding lever and easy-grip knob
- Corrosion resistant end-piece
- Low friction mouthpiece insert

#### Price Each

Order Code	Product Code	Description	1+	4+
WX43983	PR50/15	50m/165ft	£50.58	£47.60
WX43984	PR100/15	100m/330ft	£84.92	£79.92

## Diameter/Circumference Tapes

### Circumference Tapes



- Measuring tapes for outer diameters
- Laser-scaled 1/1mm graduation DIN 866
- Vernier 0.05mm
- In Black coated spring steel (maximum contrast) and Stainless spring steel

#### Price Each

Order Code	Product Code	Description	1+	2+
WX53610	5285-301	15-115 mm, Blk	£131.20	£124.64
WX53611	5285-302	100-230 mm, Blk	£185.60	£176.32
WX53612	5285-303	200-330 mm, Blk	£197.32	£187.45
WX53613	5285-304	300-620 mm, Blk	£247.48	£235.11
WX53614	5285-401	15-115 mm, SS	£103.74	£98.55
WX53615	5285-402	100-230 mm, SS	£155.72	£147.93
WX53616	5285-403	200-330 mm, SS	£164.28	£156.07
WX53617	5285-404	300-620 mm, SS	£212.28	£201.67



## Circumference & Diameter Tapes



- Circumference tapes for outer Ø and circumference
- Laser-scaled 1/1mm graduation DIN 866
- Cross section 16 x 0.2mm
- Vernier 0.1mm
- In spring steel

Price Each

Order Code	Product Code	Dia mm	Circ mm	1+	2+
WX53618	5285-101	20-300	60-950	£64.65	£61.42
WX53619	5285-102	300-700	940-2200	£78.29	£74.38
WX53620	5285-103	700-1100	2190-3460	£95.57	£90.79
WX53621	5285-104	1100-1500	3450-4720	£118.40	£112.48
WX53622	5285-105	1500-1900	4710-5980	£142.92	£135.77
WX53623	5285-106	1900-2300	5960-7230	£160.00	£152.00
WX53624	5285-107	2300-2700	7220-8500	£261.32	£248.25
WX53625	5285-108	2700-3100	8480-9760	£280.52	£266.49
WX53626	5285-109	3100-3500	9730-11010	£331.72	£315.13

## Chalk Lines

### Blue Chalk Line



- 115g Bottle of blue line chalk
- Plastic bottle of fine chalk for use with Draper and other manufacturers chalk lines
- Supplied with funnel for filling

Price Each

Order Code	Product Code	Description	1+	6+
WX38622	69582	Blue Chalk	£1.90	£1.79

### Chalk Line - 30m



High impact ABS case for strength & durability. Sliding door for quick and easy chalk refill. Stainless steel end hook - corrosion resistant. 30g chalk capacity. Line break to be used vertically as a plumb bob.

Price Each

Order Code	Product Code	Description	1+	6+
WX42018	0-47-440	Chalk Line 30m	£6.71	£6.33

## FatMax XL™ Chalk Line & Chalk



- Patented ChalkView™ case means you can see exactly how much chalk you have left
- 5:1 gear ratio fast rewind
- 3 x line abrasion resistance of traditional chalk reels
- Quick reel out release button to prevent handle spinning
- Handle locks into case to hold string in place
- Can be used vertically as a plumb bob
- Durable die cast aluminium case with belt clip
- Contains 30m (100ft) of polyester/nylon string
- Supplied with 4oz of blue chalk

Price Each

Order Code	Product Code	Description	1+	6+
WX42040	5-47-482	Chalk Line	£14.77	£13.95

### Road-Line



- Tough, high visibility ABS body
- 30m/100ft double twisted cotton line
- Ergonomic, lockable winding handle
- Corrosion resistant end-loop
- Quick change refill facility
- Complete with 360g superfine marking chalk
- Fisco products are made in the UK

Price Each

Order Code	Product Code	Description	1+	6+
WX45616	ROADLINE		£24.91	£23.44

## Squares & Angle Measurement

### Squares

#### Workshop grade B engineers squares



## Roebuck NEW

- Conforms to BS 939:1977, grade B
- Manufactured to close tolerances in high grade steel
- Both blade and stock are ground and polished with the blade being hardened and tempered

Price Each

Order Code	Product Code	Size mm	Size Inch	1+	6+
WX61034	233005	75	3	£19.55	£18.57
WX61035	233006B	100	4	£20.55	£19.52
WX61036	233007	150	6	£24.23	£23.02
WX61037	233008	225	9	£52.70	£50.07
WX61038	233009	300	12	£67.57	£64.19

### Engineer's Squares

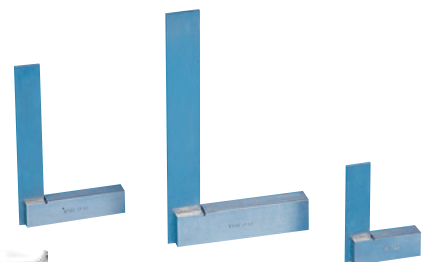


- Comply with BS939
- Precision ground blade and stock
- Blind rivetted construction
- Hardened and tempered blades

Price Each

Order Code	Product Code	Description	1+	3+
WX42000	400/3	75mm/3"	£21.85	£20.70
WX42001	400/4	100mm/4"	£21.85	£20.70
WX42002	400/6	150mm/6"	£27.08	£25.65
WX43985	400/9	225mm/9"	£58.90	£55.80
WX43986	400/12	300mm/12"	£75.53	£71.55

### 4 Piece Engineer's Square Set

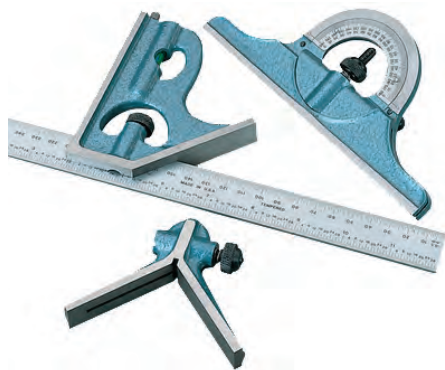


- Manufactured from high quality steel
- Beam and blade ground and lapped for accuracy
- Blade is hardened and tempered
- Stated blade length is from the inner edge of the stock to the blade tip
- 4 Piece set contains: 2", 3", 4" and 6"

Price Each

Order Code	Product Code	Description	1+	3+
WX35178	7000-54B	4 Pc Set	£77.81	£73.92

## Combination Square



## Roebuck NEW

- The square and centre heads are of hardened steel
- Protractor head is reversible and is graduated 0° to 180° in both directions
- All heads have blue stove enamelled hammer finish with accurately ground working surfaces
- The 300mm/12in blade is fully tempered and hardened
- Satin chrome finish gives exceptional clarity to the very fine graduations and resists abrasion

Price Each

Order Code	Product Code	Description	1+	6+
WX61039	031550	Combination set	£109.16	£103.70
WX61040	030585	Square Head	£43.89	£41.70
WX61041	030586	Centre Head	£33.28	£31.62
WX61042	030587	Protractor Head	£47.40	£45.03
WX61043	030588	Combination Blade 300mm / 12in	£27.53	£26.15
WX61044	030078	Part A clamp screw	£4.22	£4.05

## 360° Precision Combination Square

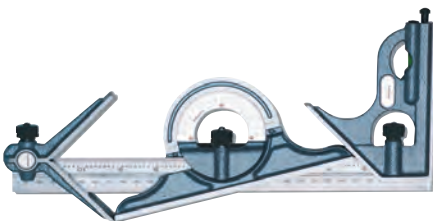


- Manufactured to BS Standard
- Protractor has full 360°
- Scale graduated 0 - 180° - 0
- Fully hardened and ground datum faces to resist wear
- Fully hardened and tempered precision rule with deeply etched graduations on both sides for ease of reading and long life
- Choice of 2 rule sizes
- Protractor, square and centre heads available separately

Price Each

Order Code	Product Code	Description	1+	3+
WX35172	CSME12	Full Set	£150.75	£142.38
<b>Range: Full Set</b>				
WX35173	CSRME12	300mm/12" Rule	£28.98	£27.45
<b>Graduation: 0.5mm every 10mm / 32nds &amp; 64ths every 1/8"</b>				
WX35174	CSRME24	600mm/24" Rule	£52.73	£49.95
<b>Graduation: 0.5mm every 10mm / 32nds &amp; 64ths every 1/8"</b>				

## Combination Square



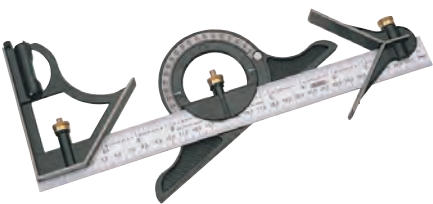
**Mitutoyo**

- 3 measuring heads attached to a stainless steel rule allowing measurements of various workpieces
- Square head is used to set the rule at 90° or 45° to the edge of the workpiece
- Centre head is used to locate centres of round workpieces
- Protractor head is used to set the rule to a desired angle

Price Each

Order Code	Product Code	1+	3+
WX20342	180-907	£119.70	£113.72

## Combination Square



- Matt black metal stock with machined faces, centre reversible protractor and brass adjusting screws
- Protractor incorporates a spirit level and is clearly graduated 0°-180° in both directions
- Stock incorporates spirit level and scribe. Aluminium blade is graduated mm and 1/16" one side and 1/2mm and 1/32" on the other

Price Each

Order Code	Product Code	1+	3+
WX35103	34704	£38.22	£36.31

## Double Squares



- Blade is hardened, tempered and chrome plated for longer life
- Blade is adjustable for position in the accurately ground cast stock
- Stock can also be used as a parallel
- Graduation reading: F: 32nds & 0.5mm R: 64ths & 1.0mm

Price Each

Order Code	Product Code	Description	1+	3+
WX35179	7104-264	100mm/4"	£38.86	£36.92
WX35180	7105-266	150mm/6"	£43.32	£41.15

## Carpenters square



## Roebuck NEW

- Blue stove enamelled hammer finish head of hardened steel
- 300mm/12in blade is graduated in imperial and metric with ground edges and ends

Price Each

Order Code	Product Code	Description	1+	6+
WX61045	031551	Carpenters square	£19.69	£18.71
WX61044	030078	Part A clamp screw	£4.22	£4.05

## Carpenters Combination Square



- Tool comprises, Combination Square Head with adjustable steel blade
- Square head provides 90° & 45° angles
- Spirit level and scribe located in Square Head
- Steel blade: 300mm / 12" long with metric and inch marking

Price Each

Order Code	Product Code	Description	1+	3+
WX31803	7111-012	300mm/12"	£19.69	£18.71

## Angle Measurement

### Universal Bevel Protractor



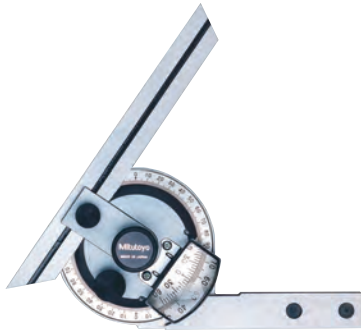
## Roebuck NEW

- Dial face and vernier in satin chrome,
- Magnifier for easy reading of vernier scale, p
- Protractor dial guaranteed 360 x 1 degree,
- Vernier scale reads to 5 minutes of arc,
- Blade length is 150mm,
- Blades made from alloy steel, hardened & ground
- 1 x right angle accessory

Price Each

Order Code	Product Code	1+	6+
WX61046	030640	£92.24	£87.63

## Universal Bevel Protractor Series 187



**Mitutoyo**

- Vernier Protractor with a minimum reading of 5 minutes
- High angle gauge for measurements of machines moulds and jigs etc
- Ideal for use as a reference when assembling or machining
- Supplied with 300mm rule magnifier and a holder

Price Each

Order Code	Product Code	1+	3+
WX20352	187-908	£182.70	£173.57

## Digital Mini-Mag Level



- Embedded magnets on 2 sides
- Measuring range 360° (4 x 90°)
- Resolution 0.05°
- Accuracy +/- 0.2°
- Standard 9V battery
- Dimensions: L60mm x H60mm x W35mm

Price Each

Order Code	Product Code	Description	1+	3+
WX43987	570-01	Digital Mini Level (Magnetic)	£40.00	£38.80

## Digital Angle Finder



level developments

- Easy to read digital LCD display, measures 360° with high resolution of 0.05°
- 'Hold' button to freeze current reading
- Absolute measurement (records the original zero position after power off)
- Simple recalibration procedure to restore factory accuracy
- Simple zero setting for relative measurement
- Clamp screw to lock the blade at any position
- Auto switch-off after 5 minutes not in use
- Supplied with battery and instructions

Price Each

Order Code	Product Code	Description	1+	3+
WX53600	PROSET-250	Angle Measure	£32.44	£30.81

## Digital Protractor



**Mitutoyo**

Calibration Available

- Full range 360° protractor
- Machined aluminium frame
- Alternative reference (zero)
- Hold function
- Display reverses when tilted past 90°
- Battery life approximately 500 hours
- Resolution of 0.1 degrees

Price Each

Order Code	Product Code	1+	3+
WX20372	950-315	£243.60	£231.42

## Electronic Level



**Roebuck** **NEW**

- An electronic digital LCD display inclinometer which can be used independently or affixed to machinery or straight edges
- Display angle (degrees) or inclination (%)
- Audible chime that indicates plumb and level
- User calibration possible
- LCD display operates through full 360° and display 0-90° or 0-100%
- Display inverts automatically to allow easy reading at any angle
- Auto power shut off after approx. 6 minutes
- Dimensions: 168 x 54 x 36mm

Price Each

Order Code	Product Code	1+	6+
WX61047	1370720	£76.63	£72.80

## PRO360 Digital Inclinometer



level developments

- The PRO 360 Digital Protractor is a revolutionary measuring tool that provides an immediate, digital reading of all angles in a 360° range
- The frame is grooved along the bottom surface to facilitate use with round objects such as pipes or shafts and incorporates threaded holes on the bottom for rigid attachment if desired
- The front panel buttons can be used to capture desired readings or to designate an alternate reference surface from which subsequent angles are then measured
- The unit can also be easily recalibrated in the field to factory accuracy using any available flat surface
- The unit operates for up to 500 hours on a single 9V battery
- Measures over full 360° range
- Standard reference = 0.00°
- ALT ZERO° button for differential readings
- HOLD° button to freeze reading
- Simple user re-calibration procedure to restore factory accuracy
- Precision machined aluminium frame
- Automatic shutdown for power save (can be disabled)
- A precision machined aluminium frame provides a rigid, lightweight, ultraprecise platform for extremely accurate measurements

- Resolution 0.01° (±10° from level)
- 0.1° (Rest of range)
- Accuracy ±0.1° (±10° from level)
- ±0.1° (±10° from plumb)
- ±0.2° (Rest of range)
- Repeatability ±0.1°
- Time Constant 0.4 seconds
- Power 9V PP3 Battery
- Serial Port None
- Dimensions; width 152.8mm, height 48.3mm, depth 30.9mm
- Weight 295g
- Temperature Range; operating 5 to 50°C, storage -20 to 65°C

Price Each

Order Code	Product Code	Description	1+	3+
WX45629	PRO360L	Inclinometer	£43.25	£41.09

## 2 Axis Digital Electronic Inclinometer



level developments

- Dual axis (x-y) or single axis (x) operation
- Digital graphical LCD display with back light
- High accuracy, 0.01° resolution, ±30° range
- RS232 digital interface
- Built in Li-Ion battery (charger supplied)
- Measurement scale switchable between degrees or mm/m
- Measuring range : ±30°
- Resolution : 0.01°
- Accuracy : ±0.05° or 1% of measured value
- Response Time : <1.0 second
- Operating Temp. : 0-45°C
- Power : Built in Li-Ion (3.7V)
- Battery Life : 100 hours
- Output Format : RS232 (9600-N-8-1)
- Weight : 250g
- Size : 115 x 62 x 29mm
- LCD : 128x64 pixels with backlight

Price Each

Order Code	Product Code	Description	1+	3+
WX45628	LD-2M	Inclinometer	£216.29	£205.48

## Exact Angle Meter





- This angle meter offers a fast, easy and inexpensive way to measure angles
- Large, readable scale for accurate readings from 0-90° in any quadrant
- Magnetic base frees hands when used on ferrous surfaces
- Measures any angle for pitch or slope
- Handy rise, run, angle, and pitch information on back of tool

Price Each

Order Code	Product Code	Description	1+	3+
WX42045	AM-2	Angle Meter	£22.25	£21.01

## Parallel & Block Sets

### 10 Pair Parallel Set



# Roebuck

NEW

- 10 pairs precision ground parallel set in moulded plastic case, consisting of the following heights 1/2, 5/8, 3/4, 7/8, 1-1/8, 1-1/4, 1-3/8, 1-1/2, 1-5/8
- All parallels 1/8 in thick x 6 in length
- Manufactured from hardened steel

Price Each

Order Code	Product Code	1+	6+
WX61048	030243	£57.10	£54.25

### Parallel Set



- Comprises of 10 pairs of hardened & ground parallels
- 1/2", 5/8", 3/4", 7/8", 1", 1-1/8", 1-1/4", 1-3/8", 1-1/2" & 1-5/8"
- Parallelism accuracy .0002"
- Matched pair accuracy .0003"
- Length = 6", Width = 1/8"

Price Each

Order Code	Product Code	Description	1+	3+
WX35115	52-437-010U	Set of 10	£56.05	£53.25

## Metal & Wire Detection

### IntelliLaser Pro



STANLEY

- Multi-depth detection of studs at 12, 25 and 38mm
- Built in laser & additional laser pod attachment
- Audible tone & graphic display on detection of studs
- Backlit LCD screen
- Continuous live wire detection
- Laser unit mounts to wall for hands free operation.

Price Each

Order Code	Product Code	Description	1+	3+
WX42021	0-77-500	IntelliLaser Pro	£67.64	£63.88

## Laser Rangefinders

### Fluke Distance Meter



FLUKE

NEW

- Now all types of users can reach beyond the limitations of the common tape measure to measure farther, with greater accuracy in more situations.
- They can perform those measurements with the Fluke accuracy, durability and reliability that professionals trust.
- The new Fluke family of laser distance meters offers features and functions that are equal to or better than competitive laser meters
- Fluke professional 414D - 50M / 165FT Accuracy ± 2mm Easy, automatic math for area and volume, add and subtract with ease
- Fluke advanced 419D - 80M / 260FT Accuracy ± 1mm 3-line display plus storage for 20 complete displays Tripod mountable
- Fluke ultimate 424D - 110M / 330FT Accuracy ± 1mm Feature-rich meter includes tilt sensor for hard-to-reach measurements, corner angle feature, compass and more

Price Each

Order Code	Product Code	Description	1+
WX61049	414D	Laser Distance Meter	£101.00
WX61050	419D	Laser Distance Meter	£185.00
WX61051	424D	Laser Distance Meter	£283.00

### Distance Estimator with Laser Pointer



DRAPER

- Expert quality, measures and calculates area, volume, depth and length of objects
- Distance range 610mm - 12M (2 - 40ft)
- Features include 0-90° adjustable head allows measurements to be easily made from floors, built-in calculator, LCD display, audible indicator, laser pointer and wrist strap
- Powered by a PP3 size battery (not included)
- A detailed instruction leaflet is enclosed with each tool
- Measuring range 0.6-15m / 2-50ft

Price Each

Order Code	Product Code	Description	1+	6+
WX38623	73968	12m	£40.21	£37.84

### Rangefinder GLM 250 VF Professional



BOSCH

- The laser rangefinder with the longest range
- Ideal for outdoor use: integrated telescopic viewfinder for optimum visibility of the laser point up to a distance of 250 m
- Maximum measurement performance and precision, even in adverse lighting conditions, due to large glass lens and ceramic optics carrier
- Numerous easy-to-operate measurement functions for fast and accurate calculation of distances, areas and volumes
- Robust for use on the construction site due to dust and splash protection of IP54
- Laser diode: 635 nm, < 1 mW
- Laser class: 2
- Measurement accuracy, typical: ± 1 mm
- Measurement time, typical: < 0.5 s
- Measuring time, max.: 4 s
- Power supply: 4 x 1.5 V LR03 (AAA)
- Automatic deactivation: 4 mins
- Weight, approx.: 0.24 kg
- Length: 120 mm, width: 66 mm, height: 37 mm
- Units of measure: m/cm/mm
- Memory capacity (values): 30
- Battery lifetime, individual measurements, approx.: 30.000
- Battery lifetime, operating time, approx.: 5 h
- Integrated telescopic viewfinder
- Carrying strap
- 4 x 1.5 V batteries
- Protective bag

Price Each

Order Code	Product Code	Description	1+	3+
WX53563	GLM250VF	250m	£249.00	£245.00

## TLM210i Laser Measure



## STANLEY

- Accuracy is +/- 1.0mm over entire range
- Range of 5cm to 100m for wide range of applications
- One person operation means greater productivity
- Easy to take measurements in busy or out-of-reach areas
- Inclination sensor
- Auto switch-off
- Calculator functions - addition, subtraction, area, volume, trapezoid and pythagoras
- Back-lit screen easy to read
- Memory function - stores last 19 readings
- Stake out function to calculate constant distances for marking out
- 2 x AAA Batteries (not supplied)

## Price Each

Order Code	Product Code	Description	1+	6+
WX43991	1-77-922	100m Laser Measure	£327.86	£309.65

## Digital Laser Rangefinder



## BOSCH

- The DLE 150 is the perfect choice for continuous measurement of distances, lengths, areas and volumes
- Accurate up to 150 metres
- Easy, self-explanatory operation with clear display
- Large light display
- Wide range of practical functions such as indirect length measurement, continuous measurement, min and max function, addition and subtraction function, and memory

Laser Diode	635 nm, < 1 mW
Laser Class	2
Measurement Range	0.3m - 150m
Accuracy	±3 mm
Power Supply	4x 1.5 V DC
Measurement Time	0.5 sec - 4 sec
Size (mm)	150 x 68 x 45

## Price Each

Order Code	Product Code	Description	1+	3+
WX35092	DLE150	150m	POA	POA

## Levels

## Laser Levels

## Cross Line Laser



## DeWALT

- 2 beam Self-levelling cross line laser is accurate to ±0.3 mm/m in levelling applications
- Self-levelling up to +/-4° surface angle with automatic out of level indication, marks a levelled line in seconds
- Indoor visibility range 15 m, Laser class 2, <1mW
- 2-button operation and low battery indication for ease of use
- Built-in magnetic pivot bracket mounts easily on metal surfaces
- Tripod connection 1/4"
- Overmolded housing helps maintain calibration under jobsite conditions
- Weight 0.46 kg, 113x61x112mm (HxWxL)
- Includes 3 x (AA) batteries for 20+ hours runtime, Wall mount bracket, Heavy duty carrying case which protects unit and helps maintain calibration when stored in gang box

## Price Each

Order Code	Product Code	1+	3+
WX41984	DW088K-XJ	£262.00	£245.63

## LASER level



## BOSCH

- New Rotation 300m diameter laser horizontal/vertical + receiver + remote control + wall mount + 122-295cm Tripod + Cut and Fill rod
- Easy to operate with horizontal and vertical self-levelling
- Easy to operate with single-button function and self-explanatory display
- Quickly settable in horizontal and vertical use due to automatic self-levelling (±5°)
- Safe working thanks to shock warning function in the event of shocks
- Set comes complete with laser receiver for accurate alignment
- Point, line and rotation modes for optimum visibility
- High accuracy of 0.1 mm/m
- High level of robustness: fully functional, even after being dropped from a height of 1 m
- Dust and splash protection IP54
- Laser diode: 635 nm, < 5 mW
- Laser class: 2
- Levelling accuracy: ± 0.1 mm/m
- Self-levelling range: ± 8° (± 5°)
- Rotation speed: 150, 300, 600 rpm
- Beam diameter: 5 mm on tool
- Power supply: 2 x 1.2 V NiMH (D)

- Operating time, max.: 40 h
- Tripod thread: 5/8"
- Weight, approx.: 1,8 kg
- Length: 170 mm, width: 183 mm, height: 186 mm
- Set includes:
  - Building Tripod BT 300 HD Professional (0 601 091 400)
  - Cut & Fill Rod GR 240 Professional (0 601 094 100)
  - Charger (2 607 225 592)
  - 1 battery pack (2 607 335 856)
  - Carrying case (2 608 438 681)
  - Wall mount
  - Laser viewing glasses
  - Remote Control RC 1 Professional (0 601 069 300)
  - Target plate
  - Laser Receiver LR 1 Professional (0 601 015 400)

## Price Each

Order Code	Product Code	1+	3+
WX53564	GRL300HVBTK300SET	£749.00	£719.00

## Rotating Laser Level Kit



## DRAPER

- Laser Level Kit with rotating tripod for 360° marking
- Designed for applications where repeat measurements are required
- Heavy duty tripod with rotating base marked 360°
- Supplied with 2 x 90° prisms, laser enhancement goggles and blow moulded carry case
- One horizontal vial and revolving angle finder

## Price Each

Order Code	Product Code	Description	1+	3+
WX30852	69580	Laser Kit	£27.01	£25.42

## SP-2 Laser Level



## STANLEY

- Rotary base for rapid & accurate set up of level and right angles
- Fixing pins for secure fixing to walls
- Base levelling screw and swing out levelling feet for precision levelling
- Plumb vial for accurate vertical levelling
- Precision vial
- Magnetic base for secure clamping to metal stud and pipe work
- Beam spreader generates laser chalk line
- Battery case
- 5/8" x 11 thread mount - fits to camera tripod
- Dimensions: 80mm x 240mm x 32mm

## Price Each

Order Code	Product Code	Description	1+	3+
WX39946	0-77-152	Laser Line	£55.58	£52.49



#### 4 in 1 Laser Level



- Designed for use where a constant level or repeat level measurements are required
- Applications include alignment of windows, dado rails, kitchen units, stairs, outdoor levelling etc
- Adjustable magnetic base plate to aid stability
- Features include laser spot, laser line, laser cross line and LED flashlight
- Accuracy: 12.7mm/9.14M
- Uses two AAA batteries (supplied)

Price Each

Order Code	Product Code	Description	1+	3+
WX38627	88987	4 in 1	POA	POA

#### Cross check level



### Roebuck NEW

- A cross check spirit level, which levels any surface in 2 directions, the accuracy is 3mm per metre
- Dimensions are 44mm x 60mm x 13
- 5mm and the level has two screw holes for mounting 4mm dia x 25mm centres

Price Each

Order Code	Product Code	1+	6+
WX61052	2017426	£2.47	£2.35

#### Spirit Levels

##### FatMax - Non-Magnetic



- Machine milled on both sides - 0.5mm/m accuracy on top face & 0.7mm/m accuracy on bottom face
- Large vials for visibility
- Shock absorbing end caps protect the accuracy of the level if accidentally dropped
- Bi-material rubber hand grips for comfort & grip
- Lifetime guarantee for accuracy
- Available in magnetic versions for steel work

Price Each

Order Code	Product Code	Description	1+	6+
WX42027	5-43-524	600mm (24")	£22.37	£21.13
WX42029	5-43-536	900mm (36")	£26.86	£25.36
WX42031	5-43-548	1200mm (48")	£31.33	£29.59
WX42033	5-43-572	1800mm (72")	£53.75	£50.76

##### FatMax - Magnetic



- Machine milled on both sides - 0.5mm/m accuracy on top face & 0.7mm/m accuracy on bottom face
- Large vials for visibility
- Shock absorbing end caps protect the accuracy of the level if accidentally dropped
- Bi-material rubber hand grips for comfort & grip
- Lifetime guarantee for accuracy
- Magnetic versions for steel work (Rare earth magnets)

Price Each

Order Code	Product Code	Description	1+	6+
WX42028	5-43-525	600mm (24")	£25.15	£23.75
WX42030	5-43-537	900mm (36")	£29.55	£27.91
WX42032	5-43-549	1200mm (48")	£34.47	£32.56

##### FatMax XL™ Box/Beam Level



- Rock solid box beam construction - up to 5 times stronger than other Stanley levels
- Solid block vials - magnified by 20% for improved all round visibility
- Dual machined faces for best in class accuracy in 8 orientations of +/-0.5mm/m
- Bi-material hand grips are screwed into the frame for comfort & grip
- Lifetime guarantee for accuracy
- Also available in magnetic versions for steel work (Rare earth magnets)

Price Each

Order Code	Product Code	Description	1+	6+
WX42035	5-43-624	600mm (24")	£30.90	£29.18
WX42037	5-43-648	1200mm (48")	£41.18	£38.90
WX42039	5-43-672	1800mm (72")	£72.11	£68.10

##### FatMax XL™ Box/Beam Level - Magnetic



- Rock solid box beam construction - up to 5 times stronger than other Stanley levels
- Solid block vials - magnified by 20% for improved all round

visibility

- Dual machined faces for best in class accuracy in 8 orientations of +/-0.5mm/m
- Bi-material hand grips are screwed into the frame for comfort & grip
- Lifetime guarantee for accuracy
- Rare earth magnets, which are twice as strong as basic strip magnets, are built into the level for stability

Price Each

Order Code	Product Code	Description	1+	6+
WX42036	5-43-625	600mm (24")	£33.32	£31.84
WX42038	5-43-649	1200mm (48")	£45.32	£42.80

#### Shark Aluminium Levels



- Heavy cast aluminium trapezoid-shaped level
- Specially manufactured to withstand the impact of hammer blows
- Accurate to 0.5 mm per metre

Price Each

Order Code	Product Code	Description	1+	6+
WX30849	69551	400mm	£27.97	£26.32
WX30850	69552	600mm	£29.82	£28.06
WX30851	69553	800mm	£35.22	£33.15

#### Torpedo Levels

##### 250mm Contractors Levels



- Expert Quality, with unique front viewing 'PLUMBSITE'® vial
- Cast aluminium with one horizontal, one 45° and a 'PLUMBSITE'® vial
- Special milled base with two ceramic magnets
- Accuracy: 0.5mm per 1M = 0.029° in standard position
- Manufactured for Draper Tools by Kapro

Price Each

Order Code	Product Code	Description	1+	6+
WX38621	69550	250mm	£28.27	£26.61

**We can supply  
the entire range.  
If you can't see  
it here, just call  
0870 240 2100**

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Test & Measurement



## Aluminium Torpedo Level



**STANLEY**

- Combines accuracy and lightweight, ideal for all small installations
- 3 vials: horizontal, plumb and 45°

Price Each

Order Code	Product Code	Description	1+	6+
WX21082	0-43-603	230mm	£16.46	£15.55

Number of Vials: 3

## Plastic Torpedo Level



**STANLEY**

- Handy and economical plastic level
- 3 vials: horizontal, plumb and 45°

Price Each

Order Code	Product Code	Description	1+	6+
WX21078	0-42-294	200mm	£4.82	£4.55

Number of Vials: 3

## Shockproof Magnetic Torpedo Level



**STANLEY** **NEW**

- High visibility vials, Horizontal, vertical and 45degree
- Rubber end caps to provide protection
- 3 Vials

Price Each

Order Code	Product Code	Description	1+	6+
WX61053	0-43-511	230mm	£11.56	£10.91

## FatMax XL™ Torpedo Level



**STANLEY**  
**FatMax**

- Rock solid box beam construction - up to 5 times stronger than other Stanley levels
- Solid block vials - magnified by 20% for improved all round visibility
- Machined faces for best in class accuracy in 8 orientations of +/-0.5mm/m
- Bi-material hand grips are screwed into the frame for comfort & grip
- Lifetime guarantee for accuracy

Price Each

Order Code	Product Code	Description	1+	6+
WX42034	5-43-609	297x62x25mm	£17.90	£16.91

## Engineers' Levels

### Engineers' Levels



- Main vial sensitivity of 1 minute
- Each level is fitted with a main, cross and plumb vial
- Main vial protected by rotating shroud
- Vial solution maintains colour and fluidity under all workshop conditions
- Precision ground cast base with vee groove for location on cylindrical work
- Resolution: 0.3mm per mtr / 0.0035" per ft

Price Each

Order Code	Product Code	Description	1+	3+
WX45630	ELM	310mmx36x58mm	£165.30	£156.60
WX35175	ELS	165x34x46 mm	£112.58	£106.65

## Scales

### 5kg Weighing Scale



**NEW**

- A low cost general purpose weighing scale ideal for a wide range of weighing applications
- It has a high grade plastic body and weighing pan with 3 function buttons
- It also has a Count-Down timer with a Hi-Frequency sonic alarm sounded on expiry
- Weighs in Kg/g or lbs/oz
- 150mmØ weighing pan
- Positive Click function buttons
- Non-slip rubber feet
- 18mm LCD display with large digits and function indicators
- Tare function can be actioned several times through a weighing cycle
- Plus/Minus weighing
- Overload indication "EEEE"
- Count-Down Timer from 99min 99sec with hi-frequency alarm at expiry
- Auto Power Off after 1 minute of no activity
- Supplied with Battery
- Calibration Certificate Issued at 5 points: 500g, 1000g, 2000g, 3000g & 4000g
- Additional points at: per point
- Capacity 5Kg
- Resolution 1g
- Accuracy ±1g
- Power 1 x 3V Lithium Button Cell Battery (CR-2032)
- Dimensions 210 x 150 x 33mm (150mmØ Pan)
- Weight 333g

Price Each

Order Code	Product Code	Description	1+	3+
WX61054	KS-22	5Kg Scale	£19.75	£18.96

## Multi-function Platform Scales



These multi-function platform scales can be either battery powered or mains powered by an AC/DC power adapter. The housing incorporates a splash-proof membrane covered display with 4 function keys. They are very simple to use and designed to suit portable type applications.

- 4 models available with capacities of 35Kg, 60Kg or 150Kg
- Display can be switched from kgs to lbs
- Stainless steel 310 x 300mm platform
- Larger platform size on MEOB-150XL of 945x505x65mm
- Extremely flat construction of only 55 mm high
- Fast stabilisation time of only 2 seconds (approx.)
- 25mm LCD display with large digits and function indicators
- Dust-protected & splash-proof to IP-54 classification (IEC standard 60529)
- Detachable display head with 1.8m coiled cable
- Tare facility can be activated during a weighing cycle
- Auto power off after 2 minutes when used with 6 1.5V AA batteries
- Supplied with AC/DC power adaptor

### Technical Specifications:

	MEOB-35	MEOB-60	MEOB-150	MEOB-150XL
Range:	35Kg	60Kg	150Kg	150Kg
Resolution:	20g	50g	100g	100G
Accuracy:	±40g	±100g	±200g	±200G
Power	AC/DC power adaptor (supplied) or 6 x 1.5V AA batteries			
Dimensions	310 x 300 x 55mm.			

Price Each

Order Code	Product Code	Description	1+	2+
WX41980	‡ MEOB-35	35Kg Platform Scale	£140.80	£135.17
WX41981	‡ MEOB-60	60Kg Platform Scale	£140.80	£135.17
WX41979	‡ MEOB-150	150kg platform Scale	£140.80	£135.17
WX43993	‡ MEOB-150XL	150kg platform Scale	£377.60	£362.50

## Platform Scales with case



**NEW**

- Portable Parts Counting Platform Scales
- These robust, portable bench scales have a Stainless Steel pan, remote display head and battery or AC/DC operation
- They are ideal for general commercial and industrial weighing applications, stores, offices, mail rooms, shipping and receiving
- Weighs in kg or lbs
- Fast stabilisation time of only 2 seconds (approx.)
- Overload protection to 50% of capacity
- Silicon rubber non-slip feet
- Stainless Steel pan
- Impact-resistant ABS plastic display head with 1.5m coiled cable
- 35mm LCD display with function indicators
- Tare facility can be actioned several times through a weighing cycle
- Plus/Minus weighing function for QA sample cross checks
- Parts Counting from 25, 50, 75 or 100 sample pieces
- Auto Power Off after 2 minutes of no activity (battery powered only)

- Supplied with aluminium carry case, battery and AC/DC mains power adaptor
- Calibration Certificate Issued at 5 points:  
MHCG-5 5Kg, 10Kg, 20Kg, 30Kg & 40Kg  
MHCG-1 20Kg, 50Kg, 80Kg, 120Kg & 140Kg

	MHCG-5	MHCG-1
Capacity	50Kg	150Kg
Resolution	20g	50g
Accuracy	±40g	±100g
Power	1 x 9V PP3 Alkaline Battery (LR-61) or AC/DC Mains Power Adaptor	
Dimensions	275 x 275 x 45mm (Platform), 180 x 95 x 40mm (Head)	
Weight	2.6Kg	

#### Price Each

Order Code	Product Code	Description	1+	3+
<b>WX61055</b> ‡	HCG-1	150Kg Scale	£75.00	£72.00
<b>WX61056</b> ‡	HCG-5	50Kg Scale	£75.00	£72.00

#### Multi-function Platform Scales - Parts Counting Function



This popular range of function-rich scales. The display head allows flexible positioning for different locations and can be used free-standing, front mounted, wall mounted or mounted on a 450mm elevation stand (ordered separately). These multi-function platform scales can be either battery or mains powered.

- Suitable for a wide range of weighing applications including parcels, parts counting and mixing
- Impact-resistant ABS display head
- 25mm back-lit LCD display with large digits and function indicators
- Backlight mode can be set on, off or auto off
- Tare function can be repeated continuously e.g. when mixing several components
- Percentage determination displays deviation from the reference weight in % instead of grams
- Parts counting from samples of 5, 10, 25 or 50 parts
- Memory accumulation of gross total weighing is ideal for batch counting or the individual and total weights of different components of a mixture
- Plus or minus weighing from user set value, ideal for quality control
- Auto zero can be user activated
- RS-232 interface for data transfer to printer or PC
- User calibration checks with certified calibration weights (required separately)
- Auto power off after 5 minutes when used with a battery
- Supplied with a front-of-platform display kit, wall mounting display kit, 1.5 metre display head to platform connection cable, display head dust cover & AC/DC power supply
- Power AC/DC power supply (supplied) or a standard 9V PP3 battery

Technical Specs:	DED-15K2	DED-35K5L	DED-60K10	DED-150K20	DED-300K50L
Range	15Kg	36Kg	60Kg	150Kg	300Kg
Resolution	5g	10g	20g	50g	100g
Accuracy	±5g	±10g	±20g	±50g	±100g

#### Price Each

Order Code	Product Code	Description	1+	2+
<b>WX61057</b>	DED-15K2	6/15kg x 2/5g RS-232 Platform Scale	£186.88	£179.40
<b>WX61058</b>	DED-35K5L	36Kg Platform Scale	£288.00	£276.48
<b>WX61059</b>	DED-60K10	60Kg Platform Scale	£186.88	£179.40
<b>WX61060</b>	DED-150K20	150Kg Platform Scale	£186.88	£179.40
<b>WX61061</b>	DED-300K50L	300Kg Platform Scale	£396.80	£380.93
<b>WX41978</b>	DE-A10	450mm Rear Display Elevation Kit	£76.80	£73.73

## Measuring Sets

### Vernier caliper set



## Roebuck NEW

- Set contains :-  
Vernier Caliper 150mm/6in,  
External Micrometer 0-25mm,  
Satin Chrome Steel Rule 150mm/6in

#### Price Each

Order Code	Product Code	1+	6+
<b>WX61062</b>	030555	£60.29	£57.28

### Digital Caliper/Mechanical Micrometer Set



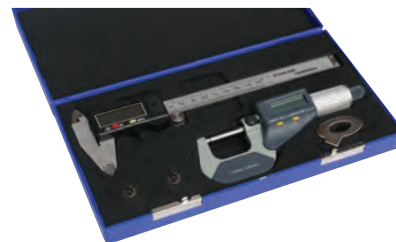
## Roebuck NEW

- Two of the most popular Roebuck measuring tools housed in a fitted plastic case
- Roebuck Electronic Caliper 150mm/6"
- Roebuck Mechanical Micrometer 0-25mm

#### Price Each

Order Code	Product Code	1+	6+
<b>WX61063</b>	9848380	£51.97	£49.37

### Electronic Caliper Set



## Roebuck NEW

- Set contains:-  
Electronic digital caliper 150mm/6in,  
splash proof electronic micrometer

#### Price Each

Order Code	Product Code	1+	6+
<b>WX61064</b>	030557	£150.42	£142.90

### Electronic Measuring Set



## Roebuck NEW

- 3 of the most popular measuring and setting tools, electronic dial gauge, digital caliper and magnetic base, conveniently housed in a fitted storage case
- Set contains:  
1 x Large Face Digital Caliper  
1 x Electronic Digital Indicator  
1 x Magnetic Base with fine adjustment

#### Price Each

Order Code	Product Code	1+	6+
<b>WX61065</b>	1248906	£139.90	£132.91

## Calipers

## Spring Calipers

### Outside Calipers



## Roebuck NEW

- Conventional European design with tapered flat section arms
- Bright finish all over including alloy steel spring
- Solid nut adjustment
- Dividers have hardened points

#### Price Each

Order Code	Product Code	Size	1+	6+
<b>WX61066</b>	030718	100mm / 4"	£9.86	£9.37
<b>WX61067</b>	030719	150mm / 6"	£11.18	£10.62
<b>WX61068</b>	030720	200mm / 8"	£14.59	£13.86

## External Spring Calipers



- Manufactured from polished tool steel
- Bow spring ensures uniform tension over working range
- Centrally mounted adjustment screw offers finer setting, than firm joint type
- Range 150mm (6")

Price Each

Order Code	Product Code	Description	1+	6+
WX38676	52/6	150mm/6"	£16.15	£15.30

## Inside Calipers


**Roebuck** NEW

- Conventional European design with tapered flat section arms
- Bright finish all over including alloy steel spring
- Solid nut adjustment
- Dividers have hardened points

Price Each

Order Code	Product Code	Size	1+	6+
WX61069	030721	100mm / 4"	£9.86	£9.37
WX61070	030722	150mm / 6"	£11.18	£10.62
WX61071	030723	200mm / 8"	£14.59	£13.86

## Internal Spring Calipers



- Manufactured from polished tool steel
- Bow spring ensures uniform tension over working range
- Centrally mounted adjustment screw offers finer setting, than firm joint type
- Range 150mm (6")

Price Each

Order Code	Product Code	Description	1+	6+
WX38675	51/6	150mm (6")	£16.15	£15.30

## Dividers


**Roebuck** NEW

- Manufactured to BS3123
- Conventional UK design with tapered flat section arms
- Bright finish all over including alloy steel spring
- Solid nut adjustment
- Dividers have hardened points

Price Each

Order Code	Product Code	Size	1+	6+
WX61072	030715	100mm / 4"	£9.67	£9.19
WX61073	030716	150mm / 6"	£11.67	£11.09
WX61074	030717	200mm 8"	£14.31	£13.59

## Spring Dividers



- Manufactured from polished tool steel
- Points are hardened to over 550Hv
- Bow spring ensures uniform tension over working range
- Centrally mounted adjustment screw for finer adjustment
- Range 150mm (6")

Price Each

Order Code	Product Code	Description	1+	6+
WX38674	50/6	150mm (6")	£16.15	£15.30

## Digital Calipers

## Full Screen Digital Caliper


**Roebuck** NEW

- Range 150mm/6"
- Resolution 0.01mm/0.0005"
- Accuracy 0.1mm/0.005"
- Extra large, full screen 10mm digits
- Lightweight plastic construction
- Metric/Inch conversion
- Zero set button
- Auto power off
- Auto power on when jaw is moved

Price Each

Order Code	Product Code	1+	6+
WX61075	1371697	£17.18	£16.32

## Large Face Electronic Calipers

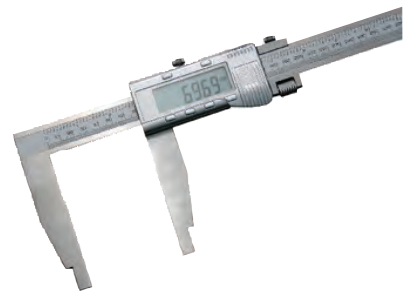

**Roebuck** NEW

- Clear and large 16mm LCD display
- Hardened stainless steel frame and measuring jaws
- Thumb-roll adjustment, knurled locking screw and depth rod
- Inch/Metric Conversion
- 0.01mm/0.0005" resolution
- 0.01mm repeatability
- $\pm 0.02$ mm accuracy
- 40mm external and 18mm internal jaws

Price Each

Order Code	Product Code	Range	1+	6+
WX61076	1370723	0-150mm/0-6"	£47.40	£45.03
WX61077	1370724	0-200mm/0-8"	£73.56	£69.88
WX61078	1370725	0-300mm/0-12"	£126.64	£120.31
WX61079	1370726	0-150mm (Metric Only)	£47.91	£45.51

## Large digital calipers


**Roebuck** NEW

- Calipers have hardened stainless steel frame and measuring jaws, fine adjustment and knurled locking screws
- Electronic features: on/off switch, inch/metric conversion, absolute/relative measuring modes and pre-set function
- Accuracy:  $\pm 0.02$ mm + (0.00005 x L)

Price Each

Order Code	Product Code	Range measuring	Int. Jaw (mm)	Ext. Jaw (mm)	Resolution	1+	6+
WX61080	030066	600mm/ 24"	18	100	0.01mm/ 0.0005in	£268.76	£255.32
WX61081	030548	1000mm/ 40"	24	125	0.01mm/ 0.0005in	£651.87	£619.28

## Fractional Caliper


**Roebuck** NEW

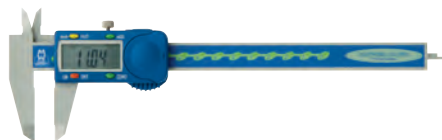
- A Digital Caliper which can display metric or imperial (fractional or decimal inch if not a proper fraction)
- Range: 0-150mm/0-6"
- Resolution: Metric: 1.01mm, Inch: 0.0005", Inch Fraction: 1/64"
- Clear LCD display with 10mm digits
- External and internal measurement accuracy  $\pm 0.2$ mm

Price Each

Order Code	Product Code	1+	6+
WX61082	1331035	£34.41	£32.69



## Polycarbonate Digital Caliper



- Polycarbonate frame
- 4 way measurement
- Accuracy +/- 0.2mm/0.008"
- Functions: mm/inch, zero setting
- Absolute/Incremental measurement
- Supplied retail packed with vinyl pouch

### Price Each

Order Code	Product Code	Description	1+	3+
WX43994	MW110-15DPC	150mm (6")	£18.00	£17.46

Resolution: 0.01mm/0.0005"

## Digital Calipers



- ABS/INC measurement
- Large LCD display
- On/off switch
- Zero point at any position
- Displays values in mm and inch
- All metal parts made of hardened stainless steel
- CR2032 battery

### Price Each

Order Code	Product Code	Description	1+	3+
WX43995	MW110-15DBL	150mm (6")	£37.50	£36.38

Resolution: 0.01mm / 0.0005"

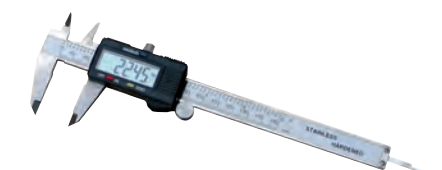
WX43996	MW110-20DBL	200mm (8")	£65.00	£63.05
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Resolution: 0.01mm / 0.0005"

WX43997	MW110-30DBL	300mm (12")	£106.00	£102.82
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Resolution: 0.01mm / 0.0005"

## Digital Calipers



- Functions: on/off switch, metric / inch conversion, zero set
- Hardened stainless steel frame and measuring jaws
- Depth Rod
- Thumbroll adjustment and knurled locking screw
- Accuracy: 49-923-150 ± 0.02mm (<100mm)
- Accuracy: 49-923-200 ± 0.03mm (>100-200mm)
- Accuracy: 49-923-300 ± 0.04mm (>200-300mm)

### Price Each

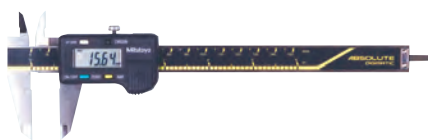
Order Code	Product Code	Description	1+	3+
WX42606	49-923-150	150mm (6")	£44.56	£42.33

WX42607	49-923-200	200mm (8")	£68.31	£64.89
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WX42608	49-923-300	300mm (12")	£136.71	£129.87
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WX38656	BATTERY	Spare Battery	£2.57	£2.44
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## Digimatic ABSolute Caliper Series 500



- Easy to read LCD display for quick easy to read accurate 4 way measurement
- Imperial metric conversion
- Zero setting/ABSolute feature
- Patented worldwide; the ABSolute Precision Function from Mitutoyo is easily explained
- Calipers equipped with this system may operate and measure without having to start all over again at the zero point each time
- You yourself establish the zero reference thus being able to display the absolute value of the measured length at each point. Which means in other words; you start at the zero point just once - this point will automatically be 'kept in mind' by the measuring instrument all the time .... even if its been switched off in between

### Price Each

Order Code	Product Code	Description	1+	3+
WX20358	500-196-20	150mm (6")	£95.24	£90.47

Resolution: 0.01 mm/0.0005"

WX32076	500-173	300mm (12")	£324.45	£308.23
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Resolution: 0.01 mm/0.0005"

## UKAS Calibrated Digimatic ABSolute Caliper Series 500



- Easy to read LCD display for quick easy to read accurate 4 way measurement
- Imperial metric conversion
- Zero setting/ABSolute feature
- Error free with no overspeed error

### Price Each

Order Code	Product Code	Description	1+	3+
WX38672	500-196-20-UKAS	Calibrated	£124.48	£118.26

Resolution: 0.01 mm/0.0005" - 150mm (6")

## Waterproof Digital Calipers

### IP Protection Ratings Explained



### INTERNATIONAL PROTECTION



- The term "protection class" generally denotes the protection of an instrument or its interior against direct contact as well as against the ingress of solid foreign bodies like objects, dust or water.
- In this connection, the resistance against strains and loads through the given operating and working conditions are defined by international protection classes (International Protection = IP). The protection classes are indicated in IP standards (DIN EN 60529) where a two-digit numerical code concretely defines the protection degree.
- The first number refers to the resistance against solid foreign bodies and dust, the second number refers to the resistance against the ingress of water. The higher the numerical value of one digit (first number 0-6, second number 0-8), the higher the protection degree.
- In this section you will find both IP66 and IP65 rated calipers

First Index	Protection against Human Contact	Protection against foreign bodies
0	No special protection.	
1	With back of hand.	Large foreign bodies diam. >50mm.
2	With a finger.	Medium-sized foreign bodies diam. >12.5
3	With tools and wires etc with a thickness >2.5mm.	Small foreign bodies diam. >2.5mm.
4	With tools and wires etc with a thickness >1mm.	Granular foreign bodies diam. >1mm.
5	Complete protection.	Dust protected; dust deposits permitted
6	Complete protection.	Dust-proof

Second Index	Water protection against:
0	No special protection
1	Water dripping vertically
2	Water dripping at an angle (up to 15° from vertical)
3	Water dripping at an angle (up to 60° from vertical)
4	Spray water from all directions
5	Water jets from a nozzle in all directions
6	High pressure jets
7	Temporary immersion
8	Permanent Immersion

## Water Resistant Digital Caliper



- Water and dust resistant to IP54 specification
- Large LCD display
- Patented ceramic capacitive sensor
- CR2032 battery
- Functions: mm/inch conversion on/off zero setting ABS/INC measurement

### Price Each

Order Code	Product Code	Description	1+	3+
WX45631	MW110-15WR	150mm (6")	£52.50	£50.93

Resolution: 0.01mm / 0.0005"

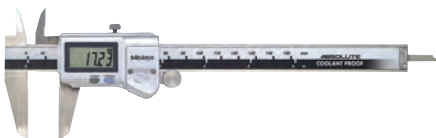
WX45632	MW110-20WR	200mm (8")	£81.50	£79.06
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Resolution: 0.01mm / 0.0005"

WX45633	MW110-30WR	300mm (12")	£120.50	£116.89
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Resolution: 0.01mm / 0.0005"

## ABSolute Coolant Proof Caliper Series 500



- Patented worldwide; the ABSolute Precision Function from Mitutoyo is easily explained:
- Calipers equipped with this system may operate and measure without having to start all over again at the zero point each time
- You yourself establish the zero reference thus being able to display the absolute value of the measured length at each point. Which means in other words; you start at the zero point just once - this point will automatically be 'kept in mind' by the measuring instrument all the time .... even if its been switched off in between
- Superb resistance to water, oil, dust and coolant, ideal for use in tough workshop conditions
- Imperial metric conversion
- Large easy to read LCD display

Price Each

Order Code	Product Code	Description	1+	3+
WX38673	500-672	150mm (6")	£109.20	£103.74

Resolution: 0.01 mm

## Waterproof Digital Calipers



- Waterproof construction to IP-65 standard
- Large clear digital display with 10mm high characters
- Functions: On / Zero switch, Metric / Inch conversion
- Accuracy: +/- 0.02mm (below 100mm), +/- 0.03mm (100 - 150mm)
- Repeatability: 0.01mm
- 4 way measurement: External, Internal, Step and Depth
- Depth rod and thumbroll adjustment

Price Each

Order Code	Product Code	Description	1+	3+
WX31745	49-165-150	150mm (6")	£136.23	£129.42

Resolution: 0.01mm

## Depth Gauges

### Digitronic Depth Caliper



- Large 7.5mm character height digital display
- Accuracy: 0.03mm; Repeatability 0.01mm
- Functions: Metric/Inch conversion, on/off, data-output, zero setting, battery low indicator

Price Each

Order Code	Product Code	Description	1+	3+
WX32115	M17015DB	150 mm (6")	£47.00	£45.59

## Series 571 Digital Depth Gauge



- Large LCD display for quick error free depth measurements
- Imperial/Metric conversion
- Repeatability: 0.01mm/0.0005"
- Accuracy: +/- 0.02mm (below 200mm)
- Zero setting/ABSolute feature
- Error free with no overspeed error
- Data output
- ABSolute feature allows depth gauge to retain origin setting even when switched off

Price Each

Order Code	Product Code	Description	1+	3+
WX32077	571-211-20	150mm (6")	£307.65	£292.27

Resolution: 0.01mm/0.0005"

## Digital Depth Gauge



- Hardened stainless steel frame and depth base
- Functions: On / Off switch, Metric / Inch conversion, Zero set
- Repeatability: 0.01mm
- Accuracy: +/- 0.02mm (below 100mm), +/- 0.03mm (100 - 150mm)
- Depth base: 100mm x 6.65mm wide

Price Each

Order Code	Product Code	Description	1+	3+
WX31747	49-900-171	150mm (6")	£63.18	£60.02

Resolution: 0.01mm

## Vernier Calipers

### Vernier calipers



- Made from stainless steel with metric and imperial graduations available with either thumblock facility or fine adjustment model which has locking screw
- Resolution 0.02mm/0.001in

Price Each

Order Code	Product Code	Adjustment	Accuracy	Range, measuring max	1+	6+
WX61083	1248905	Thumblock	±0.02mm	100mm / 4"	£27.44	£26.07
WX61084	231725	Thumblock	±0.02mm	150mm / 6"	£21.30	£20.24
WX61085	231726	Fine	±0.02mm	150mm / 6"	£24.35	£23.13
WX61086	030480	Fine	±0.02mm	200mm / 8"	£42.38	£40.26
WX61087	231727	Fine	±0.02mm	300mm 12"	£62.35	£59.23

## Vernier Caliper with Fine Adjustment Series 532



- Fine adjustment allows sensitive slider movement
- Clear graduations on satin chrome finish
- 14° measuring face angle for easy reading

Price Each

Order Code	Product Code	Description	1+	3+
WX20364	532-119	130mm (5")	£47.15	£44.80

Graduation: 0.02mm

## Vernier Caliper with Fine Screw Adjustment



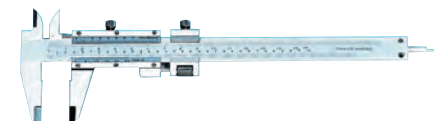
- Expert quality manufactured from hardened stainless steel
- Fourway measurement; internal, external, depth and step
- Satin scales with fine adjustment
- Fine screw adjustment
- Supplied in plastic storage case

Price Each

Order Code	Product Code	Description	1+	6+
WX20772	52380	300mm (12")	£39.88	£37.54

Graduation: 0.02mm

## Vernier Calipers with Fine Adjustment



- Hardened stainless steel frame and measuring jaws
- 4 way measurement: External, Internal, Step and Depth
- Depth rod and fine adjustment mechanism
- Dual reading: Metric 0.02mm, Inch 0.001"

Price Each

Order Code	Product Code	Description	1+	6+
WX31787	51-100-006	145mm (5-1/2")	£24.89	£23.65
WX31788	51-100-008	200mm (8")	£40.47	£38.45
WX31789	51-100-012	300mm (12")	£67.45	£64.08

Graduation: 0.01mm

## Electronic depth gauge



- Hardened stainless steel frame and depth base, depth base measures 100mm long x 6.65mm wide
- Resolution 0.01mm/0.0005in
- Capacity 150mm/6 in
- Accuracy ± 0.03mm

Price Each

Order Code	Product Code	1+	6+
WX61107	030618	£66.54	£63.21

## Tyre tread depth gauge



## Roebuck NEW

- A lightweight robust construction gauge probe & base manufactured from carbon fibre composite, with 3 Button operation: On/Off, Inch/Metric and Zero set, it is also suitable for brake shoe and pad wear and comes complete with a full set of operating instructions

Specifications:- Total Range 25mm / 1" Resolution: 0.01mm / 0.0005" Accuracy: +/- 0.2mm

		Price Each	
Order Code	Product Code	1+	6+
WX61108	2017373	£9.97	£9.47

## Dial Calipers

### Precision dial caliper



## Roebuck NEW

- These calipers have hardened stainless steel bodies, with satin chrome finish
- Four way measurement for outside, inside, depth and step
- The calipers incorporate a thumb roll for easy adjustment plus knurled locking screw

				Price Each	
Order Code	Product Code	Capacity	Graduation	1+	6+
WX61088	030125	6"	0.001 "/1.6"	£33.36	£31.69
WX61089	030126	150mm	0.02mm/40 mm	£34.51	£32.78
WX61090	030494	8"	0.001 "/1.9"	£56.94	£54.09
WX61091	030495	12"	0.001 "2.5"	£76.27	£72.46
WX61092	030496	200mm	0.02mm/48mm	£56.50	£53.68
WX61093	030497	300mm	0.02mm/63mm	£76.27	£72.46

### Dial Calipers



- 4 way measurement: External, Internal, Step and Depth
- Depth rod and thumbroll adjustment
- Hardened stainless steel frame and measuring jaws
- Clear graduations on satin chrome finish
- Metric and imperial options available

Metric and Imperial options available			Price Each	
Order Code	Product Code	Description	1+	3+
WX31792	51-200-150	150mm	£37.05	£35.20
Graduation: 0.02mm				
WX31793	51-200-200	200mm	£55.29	£52.53
Graduation: 0.02mm				
WX31790	51-200-006	6 inch	£37.05	£35.20
Graduation: 0.001"				
WX31791	51-200-008	8 inch	£55.29	£52.53
Graduation: 0.001"				

## Micrometers

### External Micrometers

#### External Micrometer



## Roebuck NEW

- Non-glare hard satin chrome spindle and sleeve with microfine graduations for accurate reading
- Positive spindle locking lever and ratchet thimble
- Tungsten carbide measuring faces
- Supplied in a plastic case complete with adjustment tool

				Price Each	
Order Code	Product Code	Range	Scale Divisions	1+	6+
WX61094	032101	0 - 25 mm	0.01 mm	£21.55	£20.47
WX61095	032102	0-1"	0.001"	£21.55	£20.47

#### Roebuck Mechanical Micrometers



## Roebuck NEW

- Accuracy conforms to BS 870 & DIN 863
- Tungsten carbide measuring faces
- Non glare hard satin chrome barrel & sleeve
- Micro fine graduations for accurate reading
- Micrometers above 25mm & 1" supplied with setting rod
- Spindle locking lever
- Spindle diameter 6.5mm
- Standard models have ratchet thimble
- Supplied in fitted case with adjustment tools
- Accuracy 0-25mm:0.001mm
- Flatness of measuring faces: 0.00076mm
- Parallelism of measuring faces: 0.000125mm

			Price Each	
Order Code	Product Code	Range	1+	6+
WX61096	9847731	25-50mm	£23.72	£22.53
WX61097	9847740	50-75mm	£31.63	£30.05
WX61098	9847758	75-100mm	£34.05	£32.35
WX61099	9847782	1-2"	£26.78	£25.44
WX61100	9847790	2-3"	£34.09	£32.35
WX61101	9847804	3-4"	£35.67	£33.85

#### External Micrometer - Tungsten Carbide



- Mechanical external micrometer
- Tungsten carbide anvils
- Accuracy to BS870
- Series 961:

- Pearl chrome plated with insulation pads
- Series 966:
- Blue textured frame finish
- Ribbed bow frame

			Price Each	
Order Code	Product Code	Description	1+	6+
WX32079	1961M	Series 961	£51.50	£49.96
Range Minimum: 0 mm, Range Maximum: 25 mm, Graduation: 0.01mm				
WX32084	1966M50	Series 966	£51.50	£49.96
Range Minimum: 25 mm, Range Maximum: 50 mm, Graduation: 0.01mm				
WX32085	1966M75	Series 966	£69.00	£66.93
Range Minimum: 50 mm, Range Maximum: 75 mm, Graduation: 0.01mm				
WX32083	1966M100	Series 966	£76.50	£74.21
Range Minimum: 75 mm, Range Maximum: 100 mm, Graduation: 0.01mm				
WX32078	1961	Series 961	£37.50	£36.38
Range Minimum: 0", Range Maximum: 1", Graduation: 0.001", Range: Series 961				
WX32080	1966-2	Series 966	£51.50	£49.96
Range Minimum: 1", Range Maximum: 2", Graduation: 0.001"				
WX32081	1966-3	Series 966	£69.00	£66.93
Range Minimum: 2", Range Maximum: 3", Graduation: 0.001"				
WX32082	1966-4	Series 966	£76.50	£74.21
Range Minimum: 3", Range Maximum: 4", Graduation: 0.001"				

#### External Micrometer - Steel



- Mechanical external micrometer
- Steel anvils
- Blue textured frame finish
- Accuracy to BS870
- Series 965:
- Tapered bow frame
- Series 966:
- Ribbed bow frame

			Price Each	
Order Code	Product Code	Description	1+	6+
WX32094	965M	Series 965	£42.00	£40.74
Range Minimum: 0mm, Range Maximum: 25mm, Graduation: 0.01 mm				
WX32099	966M50	Series 966	£59.50	£57.72
Range Minimum: 25mm, Range Maximum: 50mm, Graduation: 0.01mm				
WX32100	966M75	Series 966	£78.00	£75.66
Range Minimum: 50mm, Range Maximum: 75mm, Graduation: 0.01mm				
WX32098	966M100	Series 966	£89.00	£86.33
Range Minimum: 75mm, Range Maximum: 100mm, Graduation: 0.01mm				
WX32093	965	Series 965	£42.00	£40.74
Range Minimum: 0", Range Maximum: 1", Graduation: 0.001"				
WX32095	966-2	Series 966	£59.50	£57.72
Range Minimum: 1", Range Maximum: 2", Graduation: 0.001"				
WX32096	966-3	Series 966	£80.50	£78.09
Range Minimum: 2", Range Maximum: 3", Graduation: 0.001"				
WX32097	966-4	Series 966	£89.00	£86.33
Range Minimum: 3", Range Maximum: 4", Graduation: 0.001"				

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Test & Measurement



## Metric Micrometer Series 103



- Enamelled frame economy metric micrometers
- Tungsten tipped measuring faces
- Clear graduations on satin chrome finish
- Suitable for all external measurements in either workshop or inspection departments

Price Each

Order Code	Product Code	Description	1+	3+
WX20325	103-137	0 - 25mm	£40.85	£38.81
Graduation: 0.01mm				
WX20326	103-138H	25 - 50mm	£51.14	£48.58
Graduation: 0.01mm				

## LTL Metric Micrometers



- Accuracy conforms to BS 870
- Tungsten carbide measuring faces
- Non-glare hard satin chrome barrel and sleeve
- Enamelled frame with heat plates
- Micrometers above 25mm supplied with setting rod

Price Each

Order Code	Product Code	Description	1+	3+
WX31755	50-100-025	0 - 25mm	£25.56	£24.28
Graduation: 0.01mm				
WX31756	50-100-050	25 - 50mm	£29.07	£27.62
Graduation: 0.01mm				
WX31757	50-100-075	50 - 75mm	£34.68	£32.94
Graduation: 0.01mm				
WX31758	50-100-100	75 - 100mm	£39.52	£37.54
Graduation: 0.01mm				
WX31759	50-100-125	100 - 125mm	£45.79	£43.50
Graduation: 0.01mm				
WX31760	50-100-150	125 - 150mm	£51.21	£48.64
Graduation: 0.01mm				

## Imperial Micrometer Series 103



- Enamelled frame economy imperial micrometers
- Tungsten tipped measuring faces
- Clear graduations on satin chrome finish
- Suitable for all external measurements in either workshop or inspection departments

Price Each

Order Code	Product Code	Description	1+	3+
WX20329	103-177	0 - 1"	£40.85	£38.80
Graduation: 0.001 in				
WX20330	103-178H	1 - 2"	£51.14	£48.58
Graduation: 0.001 in				
WX20331	103-179H	2 - 3"	£67.52	£64.14
Graduation: 0.001 in				
WX20332	103-180H	3 - 4"	£75.71	£71.92
Graduation: 0.001 in				

## LTL Micrometers Sets



- Sets supplied in fitted wooden boxes
- Complete with all setting rods and adjusting tools
- Tungsten carbide measuring faces
- Enamelled frame with heat plates
- Accuracy conforms to BS 870 & DIN 863

Price Each

Order Code	Product Code	Description	1+	3+
WX31770	50-200-075	0-75 mm Set	£88.35	£83.93
Range: 0-75 mm Set, Graduation: 0.01 mm				
WX31771	50-200-100	0-100 mm Set	£128.44	£122.02
Range: 0-100 mm Set, Graduation: 0.01 mm				
WX31772	50-200-150	0-150 mm Set	£218.88	£207.94
Range: 0-150 mm Set, Graduation: 0.01 mm				
WX31767	50-200-003	0-3" Set	£88.35	£83.93
Range: 0-3" Set, Graduation: 0.001"				
WX31768	50-200-004	0-4" Set	£128.44	£122.02
Range: 0-4" Set, Graduation: 0.001"				
WX31769	50-200-006	0-6" Set	£218.88	£207.94
Range: 0-6" Set, Graduation: 0.001"				

## Mechanical digital micrometer



## Roebuck NEW

- Mechanical Digital Micrometers offer easy to read measurements from the digital display
- Measurements can also be read from the thimble as conventional micrometers

Price Each

Order Code	Product Code	Accuracy	Range	1+	6+
WX61102	9847936	0.001"	0 - 1"	£42.61	£40.48
WX61103	9847944	0.01mm	0 - 25mm	£40.84	£38.80

## Digital Micrometers

### Electronic Digital Micrometer



## Roebuck NEW

- This Micrometer features a clear LCD Display with 8mm digit sizes
- It has metric/inch conversion, a zero reset at any position, tungsten carbide anvils, spindle lock, plastic heat guard and a painted frame
- It is supplied in a fitted case as standard
- Specifications:-  
Range: 0 - 25 / 0 - 1"  
Resolution: Digital Display: 0.001mm/0.00005"  
Resolution: Mechanical Thimble: 0.01mm
- Accuracy: 0.004mm

Price Each

Order Code	Product Code	Accuracy	Range	1+	6+
WX61104	2017364	0.004mm	0 - 25 / 0 - 1 in	£61.96	£58.86

### Splash Proof Electronic Micrometer



## Roebuck NEW

- This micrometer provides protection against ingress of dust and splashed liquid
- Complete with friction thimble and spindle lock
- Large LCD display, automatic switch-off and tungsten carbide anvil faces

Price Each

Order Code	Product Code	Range	1+	6+
WX61105	030122	0-25 mm / 0 - 1 in	£93.15	£88.49

### Digitronic Outside Micrometer IP54



- 201 Series from Moore & Wright protected to IP54 specifications
- Rugged steel design
- Large LCD display
- Absolute and Incremental modes
- Carbide measuring faces
- Ball attachment included

Price Each

Order Code	Product Code	Description	1+	6+
WX44000	MW201-01DAB Series 201		£78.50	£76.15
Range: 0 - 25mm / 0 - 1", Resolution 0.001mm / 0.00005"				
WX44001	MW201-02DAB Series 201		£97.50	£94.58
Range: 25 - 50mm / 1 - 2", Resolution 0.001mm / 0.00005"				
WX44002	MW201-03DAB Series 201		£106.00	£102.82
Range: 50 - 75mm / 2 - 3", Resolution 0.001mm / 0.00005"				
WX44003	MW201-04DAB Series 201		£131.00	£127.07
Range: 75-100mm / 3 - 4", Resolution 0.001mm / 0.00005"				

## Digimatic Micrometer Series 293



**Available** **Mitutoyo**

- Easy to use digital micrometers
- Large LCD display for error free external measurements
- Imperial/metric conversion at the touch of a button
- Origin setting
- Auto power off
- Tungsten carbide tipped measuring faces

			Price Each	
Order Code	Product Code	Description	1+	3+
WX20355	293-344	0-25 mm / 0-1"	£140.70	£133.67
Graduation: 0.001mm				

## Digital Micrometer



**Mitutoyo**

- Simple to use digital micrometer
- Large LCD display
- Imperial metric conversion
- 215g lightweight construction
- Easy one handed operation

			Price Each	
Order Code	Product Code	Description	1+	3+
WX20356	293-832	0-25 mm / 0-1"	£90.62	£86.08
Graduation: 0.001 mm				

## Electronic digital micrometer



**Roebuck** **NEW**

- This micrometer features a clear LCD display, with easy metric/ inch conversion
  - It has relative & absolute modes, tungsten carbide anvils an auto power off after 5 minutes, friction thimble, spindle lock lever, plastic heat guard painted frame
  - It is supplied with ball anvil attachment and a fitted case
- Specifications :-  
Range: 0-25mm / 0-1"  
Resolution 0.001mm/0.00005"  
accuracy 0.002mm

			Price Each	
Order Code	Product Code		1+	6+
WX61106	2017365		£67.97	£64.57

## Internal Micrometers

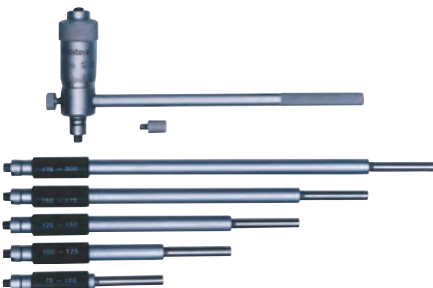
### Series 900 Internal Micrometers



- Each model comprises of:
- Measuring head
- Set of extension rods
- Spacing collar (to facilitate alternative measuring range)
- Complete with detachable extension handles
- Fitted case

			Price Each	
Order Code	Product Code	Description	1+	6+
WX32090	903M	50 - 310mm	£144.50	£140.17
WX32089	903	2 - 12"	£144.50	£140.17

### Interchangeable Rod Series 141



**Mitutoyo**

- Interchangeable rods allow a large range of bores to be measured
- Clear graduations on satin chrome finish
- Includes handle for deep hole measurement
- Metric / imperial measurement options

			Price Each	
Order Code	Product Code	Description	1+	3+
WX20336	141-206	50 - 300mm	£183.75	£174.56
Range Minimum: 50mm, Range Maximum: 300 mm, Graduation: 0.01mm, Range: 50 - 300mm				
WX20337	141-233	2 - 12"	£183.75	£174.56
Range Minimum: 2 in, Range Maximum: 12 in, Graduation: 0.001 in, Range: 2 - 12"				

### Inside Micrometers

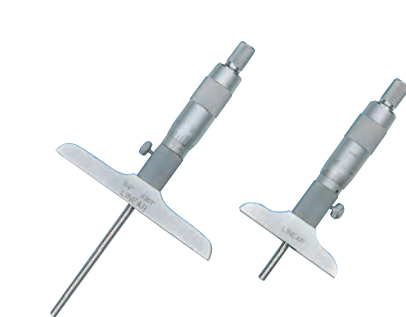


- Satin chrome ratchet spindle and sleeve
- Microfine graduations for accurate reading
- Spindle locking screws
- Conforms to BS 870 for accuracy
- Supplied with setting rings on product codes 50-350-075 and 50-530-100

			Price Each	
Order Code	Product Code	Description	1+	3+
WX31778	50-350-030	0 - 25mm	£74.48	£70.76
Range: 0 - 25mm, Graduation: 0.01 mm				
WX31779	50-350-050	25 - 50mm	£80.56	£76.53
Range: 25 - 50 mm, Graduation: 0.01 mm				
WX31776	50-350-001	0 - 1"	£74.48	£70.76
Range: 0 - 1", Graduation: 0.001"				
WX31777	50-350-002	1 - 2"	£80.56	£76.53
Range: 1 - 2", Graduation: 0.001"				

## Depth Micrometers

### LTL Depth Micrometers



- Satin chrome micrometer head
- Hardened and ground base
- Flat ended anvils 4.5mm dia.
- Metric reading: 0.01mm, Inch reading 0.001"

			Price Each	
Order Code	Product Code	Description	1+	3+
WX31764	50-170-025	0 - 25mm	£45.50	£43.23
Graduation: 0.01mm				
WX35113	50-175-100	0 - 100mm	£98.33	£93.41
Graduation: 0.01mm				
WX31763	50-170-001	0 - 1"	£65.36	£62.09
Graduation: 0.001"				
WX31765	50-175-006	0 - 6"	£129.39	£122.92
Graduation: 0.001"				

### Depth Gauge Micrometers



- Interchangeable depth rods, 4mm diameter
- 63.5mm / 2.5in base length
- Accuracy to BS6468

			Price Each	
Order Code	Product Code	Description	1+	3+
WX32088	891M150	0 - 150mm	£162.50	£157.63
Graduation: 0.01mm				
WX32087	891-6	0 - 6"	£158.00	£153.26
Graduation: 0.001 in				

**Can't see it  
here, just call  
0870 240 2100**

## Digital Depth Micrometers



- Friction thimble for easy one handed use
- Range: 0-150mm / 0-6"
- Base size: 100mm wide
- Complete with 6 flat end depth rods
- Dia of rods 4.5mm
- Tolerance, relative and absolute modes
- True inch/metric conversion at the touch of a button
- Resolution: 0.001mm & 0.0005"
- Satin chrome frame and thimble

Price Each

Order Code	Product Code	Description	1+	3+
WX35114	50-890-006	0-150mm (0-6")	£192.85	£183.21

## Micrometer Accessories

### Ball Attachment



Mitutoyo

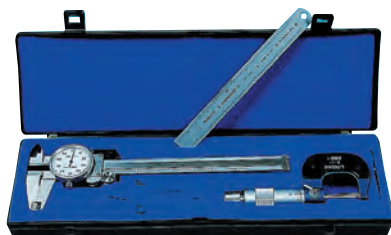
- Attachment for conventional micrometers to enable the measurement of concave surfaces
- Suitable for models up to 150mm / 6"
- Metric version has 5mm ball
- Imperial version has 0.2" ball

Price Each

Order Code	Product Code	Description	1+	3+
WX20323	101468E	Imperial	£5.15	£4.89
WX20324	101468M	Metric	£5.15	£4.89

## Measuring Sets

### Measuring Set



- 3 piece measuring kits
- Contents:
  - Dial Caliper (metric or inch)
  - Mechanical Micrometer (metric or inch)
  - 1 x Metric / Inch rule

Price Each

Order Code	Product Code	Description	1+	4+
WX31782	50-610-025	Metric	£66.12	£62.81
WX31781	50-610-001	Imperial	£66.12	£62.81

## 6 Piece Measuring Set



- Useful set of precision measuring instruments.
- Contents include:
  - Spring Divider
  - Outside Caliper
  - Inside Spring Caliper
  - Depth Gauge
  - Slide Rule
  - Sliding Caliper

Price Each

Order Code	Product Code	Description	1+	6+
WX20768	59110	6 Pc Set	£25.40	£23.90

## Gauges

### Bore Gauges

#### Bowers 3 Point Metric Bore Gauges



- XT Analogue Bowers XT Analogue Bore Gauges are an economical solution to accurate shop-floor bore measurement
- The extended mechanical travel of these advanced two or three point gauges ensures that exchanging measuring anvils is now unnecessary
- Range 2 – 300mm (0.080" – 12")
- 2 – 6mm 2 point/ 6 – 300mm 3 point measurement
- Graduation 2-6mm: 0.001mm, 6-300mm: 0.005mm
- Tungsten carbide measuring faces on all 3-point heads from 12.5mm
- Blind bore measurement from 2mm – 6mm and above 12.5mm (0.500")
- Extensions available above 6mm for deep hole measurement
- Ratchet stop to ensure consistent measurement
- Setting rings included with individual instruments and sets
- UKAS certificates supplied as standard with all setting rings
- UKAS Certificate supplied as standard with all XT mechanical micrometers
- Heads with special anvils available to suit specific customer requirements (e.g. groove measurement)
- Bore gauges manufactured according to DIN 863, part 4

Price Each

Order Code	Product Code	Type	1+	3+
WX38610	XTA6M	6 - 8mm	£203.50	POA
Accuracy: 0.004 mm, Setting Ring: 8mm				
WX38614	XTA8M	8 - 10mm	£211.50	POA
Accuracy: 0.004mm, Setting Ring: 8mm				
WX38594	XTA10M	10 - 12.5mm	£218.00	POA
Accuracy: 0.004mm, Setting Ring: 12.5mm				
WX38596	XTA12M	12.5 - 16mm	£218.00	POA
Accuracy: 0.004mm, Setting Ring: 12.5mm				
WX38598	XTA16M	16 - 20mm	£222.00	POA
Accuracy: 0.004mm, Setting Ring: 20mm				
WX38600	XTA20M	20 - 25mm	£235.00	POA
Accuracy: 0.004mm, Setting Ring: 20mm				
WX38602	XTA25M	25 - 35mm	£338.50	POA
Accuracy: 0.004mm, Setting Ring: 35mm				
WX38604	XTA35M	35 - 50mm	£344.50	POA
Accuracy: 0.004mm, Setting Ring: 35mm				
WX38606	XTA50M	50 - 65mm	£410.50	POA
Accuracy: 0.005mm, Setting Ring: 65mm				
WX38608	XTA65M	65 - 80mm	£410.50	POA
Accuracy: 0.005mm, Setting Ring: 65mm				
WX38612	XTA80M	80 - 100mm	£520.50	POA
Accuracy: 0.005mm, Setting Ring: 80mm				
WX38592	XTA100M	100 - 125mm	£539.00	POA
Accuracy: 0.005mm, Setting Ring: 12mm				

#### Bowers 3 Point Imperial Bore Gauges



- XT Analogue Bowers XT Analogue Bore Gauges are an economical solution to accurate shop-floor bore measurement
- The extended mechanical travel of these advanced two or three point gauges ensures that exchanging measuring anvils is now unnecessary
- Range 2 – 300mm (0.080" – 12")
- 2 – 6mm 2 point/ 6 – 300mm 3 point measurement
- Graduation 2-6mm: 0.001mm, 6-300mm: 0.005mm
- Tungsten carbide measuring faces on all 3-point heads from 12.5mm
- Blind bore measurement from 2mm – 6mm and above 12.5mm (0.500")
- Extensions available above 6mm for deep hole measurement
- Ratchet stop to ensure consistent measurement
- Setting rings included with individual instruments and sets
- UKAS certificates supplied as standard with all setting rings
- UKAS Certificate supplied as standard with all XT mechanical micrometers
- Heads with special anvils available to suit specific customer requirements (e.g. groove measurement)
- Bore gauges manufactured according to DIN 863, part 4

Price Each

WX38609	XTA6I	1/4 - 5/16"	£203.50	POA
Accuracy: 0.00015", Setting Ring: .312"				
WX38613	XTA8I	5/16 - 3/8"	£211.50	POA
Accuracy: 0.00015", Setting Ring: .312"				

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Test & Measurement

2084

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WX38609 ‡	XTA6I	1/4 - 5/16"	£203.50	POA
Accuracy: 0.00015", Setting Ring: .312"				
WX38613	XTA8I	5/16 - 3/8"	£211.50	POA
Accuracy: 0.00015", Setting Ring: .312"				
WX38593	XTA10I	3/8 - 1/2"	£218.00	POA
Accuracy: 0.00015", Setting Ring: .500"				
WX38595	XTA12I	1/2 - 5/8"	£218.00	POA
Accuracy: 0.00015", Setting Ring: .750"				
WX38597	XTA16I	5/8 - 3/4"	£222.00	POA
Accuracy: 0.00015", Setting Ring: .750"				
WX38599	XTA20I	3/4 - 1"	£242.00	POA
Accuracy: 0.00015", Setting Ring: 1.375"				
WX38601	XTA25I	1 - 1.3/8"	£338.50	POA
Accuracy: 0.00015", Setting Ring: 1.375"				
WX38603	XTA35I	1.3/8 - 2"	£344.50	POA
Accuracy: 0.00015", Setting Ring: 1.375"				
WX38605	XTA50I	2 - 2.5/8"	£410.50	POA
Accuracy: 0.00020", Setting Ring: 2.625"				
WX38607	XTA65I	2.5/8 - 3.1/4"	£410.50	POA
Accuracy: 0.00020", Setting Ring: 2.625"				
WX38611	XTA80I	3.1/4 - 4"	£520.50	POA
Accuracy: 0.00020", Setting Ring: 3.250"				
WX38591	XTA100I	4 - 5"	£539.00	POA
Accuracy: 0.00020", Setting Ring: 5.000"				

#### Telescopic Gauges 315 Series



- For quick inside measurement and determination of inside diameters
- Spring loaded plunger that expands in the bore or groove
- Satin chromed body
- With auto extension and direct locking
- Measuring faces are hardened and micro-lapped
- Range:-
  - 8-12.7mm
  - 12.7-19.0mm
  - 19.0-32.0mm
  - 32.0-54.0mm
  - 54.0-90.0mm
  - 90.0-150.0mm

Price Each

Order Code	Product Code	Description	1+	3+
WX44007	MW315.01	Metric	£75.50	£73.24

#### Telescopic hole gauge set



## Roebuck NEW

- Provide easy and accurate measurement of holes and slots
- Two plungers under equal and constant spring pressure can be locked between the walls of a slot or across the diameter of a hole and measured by caliper or micrometer
- Hardened and ground tips

Price Each

Order Code	Product Code	Capacity	Range	1+	6+
WX61109	031070	8-150 mm	5/16 - 6	£93.89	£89.20

### Hole / Depth Gauges Thickness Gauges

#### Snapcal Digital Caliper



- Spring-loaded travel
- Inch/mm conversion
- Wide faced flat jaw for easy positioning
- Hardened stainless steel construction
- Supplied in rugged holster
- Accuracy: +/-0.02mm/0.001"

Price Each

Order Code	Product Code	Description	1+	3+
WX44008	MW461-01D	0-30mm/0-1.25"	£67.00	POA

Resolution: 0.01mm / 0.0005"

#### Mini Thickness Gauge Series 7



### Mitutoyo

- Compact pocket size Digimatic Thickness Gauge
- Ideal for measuring paper, plastic, sheet, metal and film
- Metric / Imperial conversion
- Measuring faces are hardened ground and lapped

Price Each

Order Code	Product Code	Description	1+	3+
WX20369	700-118	0 - 12mm	POA	POA

Resolution: 0.01 mm, Accuracy: ±0.02mm/±0.001"

### Electronic Thickness Gauges

#### USB Datalogging Coating Thickness Meter



- The DT-156 is a compact coating thickness meter and measures the thickness of coatings on ferrous and non-ferrous metallic substrates. Example coatings include paint, lacquer, plastic, rubber and epoxy. The sensor is integral to the instrument. A USB interface facilitates the download of measurements for comparison tests and record keeping.
- Measure microns 0 to 1250µm
- Automatic recognition of Ferrous or Non-Ferrous substrate
- Continuous or single measurements.
- Statistic display of Average, Maximum and Minimum
- Memory for 400 readings as single or group
- Hi and Lo alarm
- Compact and robust integral sensor built in
- Auto Power Off
- Low Battery Indicator
- USB interface for data output to PC or Laptop
- User calibration using supplied calibration foils and base plates
- Will measure on substrate curvatures of:
  - 1.5mm Ferrous, 3mm Non-Ferrous
- Supplied with 1 ferrous & 1 non-ferrous base plate, calibration foils, software, USB connection cable, carry case and batteries
- 2 year warranty
- CALIBRATION
  - Calibration Certificates are available for both the instrument and the calibration foils
- Technical Specifications
  - Range Up to 1,250µm (micron)
  - Resolution 0.1 Low Range, 1µm High Range
  - Accuracy ±3%+1 of reading
  - Min Measuring Area 7mm Ferrous, 5mm Non-Ferrous
  - Min base thickness 0.5mm Ferrous, 0.3mm Non-Ferrous
  - Power 2 x AA 1.5V Alkaline Batteries (LR-6)
  - Dimensions 114 x 55 x 27mm
  - Weight 1101g

Price Each

Order Code	Product Code	1+	4+
WX61110 ‡	DT-156	£150.00	£144.00

‡ Special delivery applies. Please call for details

Please see  
the Abrasive  
and Cutting  
Tools section  
for all your  
power tool  
accessories



## RS-232 Ultrasonic Material Thickness Gauge



- The TD-225 can accurately measure the thickness of steel (ferrous metals) using sophisticated non-invasive ultrasonic's. Using the RS-232C interface and software results can be logged on a computer
- Impact-resistant ABS case with integral calibration plate
- RS-232C data output for PC connection
- User selectable between mm and inches
- 30mm LCD display with function indicators
- Auto Power Off function
- 2 years warranty
- Supplied with 4 x 1.5v AA batteries, control plate, calibration foils, 10mm Ø sensor, range 1 to 225mm (max 50°C) & hard carry case
- Software and PC connection cable optional (TD-01)
- Optional Sensors Available:
  - TB-US01 6mm Ø probe for thin material, range 1 to 50mm (max 50°C)
  - TB-US02 12mm Ø probe for hot work up to 300°C, range 1 to 225mm
- Technical Specifications
  - Range 1.2 to 225mm (Steel)
  - Resolution 0.1mm
  - Accuracy  $\pm 0.5\%$  of the measured value
  - Power 2 x 1.5V AA Alkaline Batteries (MLR-6)
  - Dimensions 120 x 62 x 30mm
  - Weight 164g

Price Each

Order Code	Product Code	1+	4+
WX53557 ‡	TD-225	£352.00	£337.92
WX53558 ‡	TB-US01	£160.00	£153.60
WX53559 ‡	TB-US02	£314.88	£302.28
WX53560 ‡	TD-01	£96.00	£92.16
WX53561 ‡	TG-GEL	£5.75	£5.52

‡ Special delivery applies. Please call for details

## Cygnus 2- Hands Free Ultrasonic Thickness Gauge



- Hands free multiple echo ultrasonic digital thickness gauge
- Measures metal thickness to determine wastage or corrosion - accurately, quickly and without removing protective coatings
- Taking metal thickness checks in areas where hands free operation is necessary for instance:
  - Where either rope access Ladder or scaffold work is necessary
  - Cranes
  - Hoppers
  - Containers
  - Pylons
  - High Structures
  - Ships
- Measurement Range:
  - 3 - 250 mm with 2.25 MHz Probe
  - 2 - 150 mm with 3.5 MHz Probe
  - 1 - 50 mm with 5 MHz Probe
- Accuracy  $\pm 0.05\text{mm}$
- Power 2 x AA alkaline batteries 20 hours continuous use

Environmental Protection IP 65 and IP67

- Comes as a complete Kit with 1 probe 1 lead 2 sets of batteries carry case and protective case
- Call for more details

Price Each

Order Code	Product Code	1+
WX53577 ‡	002-7140/4 Cygnus 2	£1,545.00

‡ Special delivery applies. Please call for details

## Feeler Gauges

## Feeler Gauge Sets



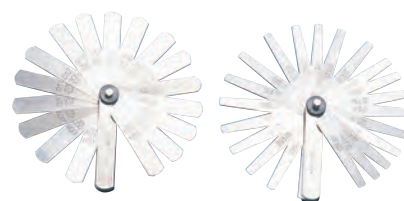
## Roebuck NEW

- Precision gauges with taper steel blades, hardened and polished
- Each blade is marked with size and folds into the polished metal case

Price Each

Order Code	Product Code	Length of Blade	Size Range	1+	6+
WX61111	230623	100 mm/4 in	0.05 - 1.0mm	£9.10	£8.65
WX61112	230624	100 mm/4 in	0.002-0.035"	£9.10	£8.65

## Feeler Gauges

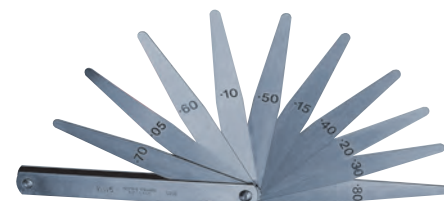


- Blades manufactured from high quality feeler gauge stock
- Blades housed in sturdy steel case
- 5026 & 5027: 26 Straight blades, length 3" x 1/2" wide
- 5026T: 26 Tapered blades, length 3" x 1/4" wide

Price Each

Order Code	Product Code	Description	1+	3+
WX31773	5026	0.0015" - 0.025"	£16.06	£15.25
WX31775	5027	0.0015" - 0.035"	£16.06	£15.25
WX31577	5026T	0.0015" - 0.025"	£16.06	£15.25

## Feeler Gauge Sets



- 10 Blades in each set
- Hardened, tempered and polished

## Imperial Feeler Gauge

Price Each

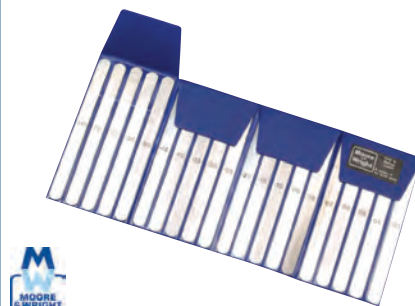
Order Code	Product Code	Description	1+	3+
WX32091	911	4" Length	£7.13	£6.75
Width: 0.5 in, Range: 0.015 - 0.025 in				
WX35129	1106	6" Length	£23.28	£22.05
Width: 0.5 in, Range: 0.015 - 0.025 in				
WX35130	1112	12" Length	£30.88	£29.25
Width: 0.5 in, Range: 0.015 - 0.025 in				

## Metric Feeler Gauge

Price Each

Order Code	Product Code	Description	1+	3+
WX32092	911M	100mm Length	£7.13	£6.75
Width: 12.7mm, Range: 0.50 - 0.80mm				
WX35131	1106M	150mm Length	£23.28	£22.05
Width: 12.7mm, Range: 0.05 - 0.80mm				
WX35132	1112M	300mm Length	£30.88	£29.25
Width: 12.7mm, Range: 0.05 - 0.80mm				

## Feeler Strip Sets



- 20 Piece Feeler strips in wallet
- Hardened, tempered and polished

Price Each

Order Code	Product Code		1+	3+
WX32108	FS20M	Metric	£33.73	£31.95
Length: 150 mm, Range: Metric				
WX32107	FS20E	Imperial	£33.73	£31.95
Length: 6 in, Range: Imperial				

## Feeler Gauge Sets Series 184



Mitutoyo CALIBRATION Available ✓

- Made from finest tempered steel
- Size clearly stamped on each leaf
- Leaves are easily removed
- All leaves can be individually locked open
- Metric set contains 22 sizes 0.05-1mm in 0.05mm steps

Price Each

Order Code	Product Code	Description	1+	3+
WX20351	184-304S	Metric	£23.73	£23.03

## Metric Feeler Strip



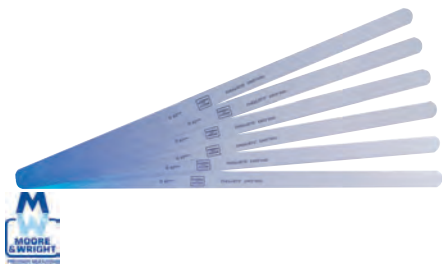


- Complies with DIN2275
- Standard features include:
  - Hardened, tempered and polished steel strip
  - Nominal thickness is marked on each strip
  - Length 300mm
  - Width 12.7mm

#### Price Each

Order Code	Product Code	Thickness	1+	3+
WX35153	126M003	0.03mm	£2.85	£2.70
WX35154	126M004	0.04mm	£2.85	£2.70
WX35155	126M005	0.05mm	£2.85	£2.70
WX35156	126M006	0.06mm	£2.85	£2.70
WX35157	126M007	0.07mm	£2.85	£2.70
WX35158	126M008	0.08mm	£2.85	£2.70
WX35159	126M009	0.09mm	£3.80	£3.60
WX35160	126M010	0.10mm	£3.80	£3.60
WX35161	126M015	0.15mm	£3.80	£3.60
WX35162	126M020	0.20mm	£3.80	£3.60
WX35163	126M025	0.25mm	£3.80	£3.60
WX35164	126M030	0.30mm	£3.80	£3.60
WX35165	126M035	0.35mm	£3.80	£3.60
WX35166	126M040	0.40mm	£3.80	£3.60
WX35167	126M045	0.45mm	£3.80	£3.60
WX35168	126M050	0.50mm	£5.70	£5.40

#### Imperial Feeler Strip



- Complies with DIN2275
- Standard features include:
  - Hardened, tempered and polished steel strip
  - Nominal thickness is marked on each strip
  - Length 12" (inch)
  - Width 0.5" (inch)

#### Price Each

Order Code	Product Code	Thickness	1+	3+
WX35133	126/0001	0.001"	£2.95	£2.79
WX35134	126/00015	0.0015"	£2.95	£2.79
WX35135	126/0002	0.002"	£2.95	£2.79
WX35136	126/0003	0.003"	£2.95	£2.79
WX35137	126/0004	0.004"	£3.80	£3.60
WX35138	126/0005	0.005"	£3.80	£3.60
WX35139	126/0006	0.006"	£3.80	£3.60
WX35140	126/0007	0.007"	£3.80	£3.60
WX35141	126/0008	0.008"	£3.80	£3.60
WX35142	126/0009	0.009"	£3.80	£3.60
WX35143	126/0010	0.010"	£3.80	£3.60
WX35144	126/0012	0.012"	£3.80	£3.60
WX35145	126/0013	0.013"	£3.80	£3.60
WX35146	126/0014	0.014"	£3.80	£3.60
WX35147	126/0015	0.015"	£3.80	£3.60
WX35148	126/0016	0.016"	£3.80	£3.60
WX35149	126/0017	0.017"	£3.80	£3.60
WX35150	126/0018	0.018"	£3.80	£3.60
WX35151	126-0019	0.019"	£5.70	£5.40
WX35152	126-0020	0.020"	£5.70	£5.40

#### 5" Metric Steel Feeler Gage Poc-Kit



- POC-KITS® contains twenty 1/2" wide blades
- Packaged in a sturdy, vinyl case
- Individual blade pockets
- Conveniently folds flat
- Each blade is clearly etched with inch and metric sizes
- Ends are rounded and edges are smooth for safety
- Vinyl case helps prevent rust and extends blade life
- Contents:

.001"/.025mm	.010"/.254mm
.0015"/.038mm	.012"/.305mm
.002"/.051mm	.014"/.356mm
.003"/.076mm	.015"/.381mm
.004"/.102mm	.016"/.406mm
.005"/.127mm	.018"/.457mm
.006"/.152mm	.020"/.508mm
.007"/.178mm	.022"/.559mm
.008"/.203mm	.024"/.610mm
.009"/.229mm	.025"/.635mm

#### Price Each

Order Code	Product Code	Description	1+	6+
WX44009	77-119-740	5" Kit	£36.67	£34.74

#### 12" Metric Steel Feeler Gage Poc-Kit



- POC-KITS® contains twenty 1/2" wide blades
- Packaged in a sturdy, vinyl case
- Individual blade pockets
- Conveniently folds flat
- Each blade is clearly etched with size in metric and inches
- Ends are rounded and edges are smooth for safety
- Vinyl case helps prevent rust and extends blade life
- Contents:

.001"/.025mm	.010"/.254mm
.0015"/.038mm	.012"/.305mm
.002"/.051mm	.014"/.356mm
.003"/.076mm	.015"/.381mm
.004"/.102mm	.016"/.406mm
.005"/.127mm	.018"/.457mm
.006"/.152mm	.020"/.508mm
.007"/.178mm	.022"/.559mm
.008"/.203mm	.025"/.635mm
.009"/.229mm	.030"/.762mm

#### Price Each

Order Code	Product Code	Description	1+	6+
WX44010	77-119-990	12" Kit	£83.22	£78.84

#### Stainless Steel POC-KIT® Assortment



- Contains twenty 5" long x 1/2" wide blades
- Contains sixteen different thicknesses; duplicate blades have been included on the four most commonly used thicknesses
- Packaged in a sturdy, vinyl case which extends blade life
- Individual blade pockets
- Conveniently folds flat
- Each blade is clearly etched with inch and metric sizes
- Ends are rounded and edges are smooth for safety
- Contents:

Qty	Sizes	Qty	Sizes
2	.001"/.025mm	1	.008"/.203mm
2	.0015"/.038mm	1	.009"/.229mm
2	.002"/.051mm	1	.010"/.254mm
2	.003"/.076mm	1	.012"/.305mm
1	.004"/.102mm	1	.015"/.381mm
1	.005"/.127mm	1	.020"/.508mm
1	.006"/.152mm	1	.025"/.635mm
1	.007"/.178mm	1	.031"/.787mm

#### Price Each

Order Code	Product Code	Description	1+	6+
WX44011	77-177-750	20 x 5" Kit	£127.30	£120.60

Easy ordering  
by phone, fax,  
email, web  
or via your  
local Brammer  
Sales and  
Service Centre



## Plastic Thickness Gauge Assortments



- Contains thirteen blades riveted together for on-site convenience
- Made of the highest quality plastic material
- .001" to .005" - Polyester
- .0075" to .030" - Vinyl
- 1/2" wide blades are available in 5" & 12" lengths
- Color indicates thickness
- Packaged in a sturdy vinyl case
- Non-corrosive, non-conductive, non-sparking and non-marring
- Individual blades are also available on special order
- Both sets contain:

Thickness	Color	Thickness	Color
.001"/.025mm	Amber	.010"/.254mm	Brown
.0015"/.038mm	Purple	.0125"/.318mm	Black
.002"/.051mm	Red	.015"/.381mm	Pink
.003"/.076mm	Green	.020"/.508mm	Yellow
.004"/.102mm	Tan	.025"/.635mm	White
.005"/.127mm	Blue	.030"/.762mm	Coral
.0075"/.191mm	Matte		

Price Each

Order Code	Product Code	Description	1+	6+
WX44012	77-178-905	5" Plastic Assortment	£33.82	£32.04
WX44013	77-178-900	12" Plastic Assortment	£50.83	£48.15

## Brass POC-KIT® Assortment



- Contains twenty 5" long x 1/2" wide blades
- Manufactured from 260 alloy
- Packed in a sturdy, vinyl case which extends blade life
- Individual blade pockets
- Conveniently folds flat
- Each blade is clearly etched with inch and metric sizes
- Ends are rounded and edges are smooth for safety
- Set contains:

.001"/.025mm	.010"/.254mm
.0015"/.038mm	.012"/.305mm
.002"/.051mm	.014"/.356mm
.003"/.076mm	.015"/.381mm
.004"/.102mm	.016"/.406mm
.005"/.127mm	.018"/.457mm
.006"/.152mm	.020"/.508mm
.007"/.178mm	.022"/.559mm
.008"/.203mm	.025"/.635mm
.009"/.229mm	.030"/.762mm

Price Each

Order Code	Product Code	Description	1+	6+
WX44014	77-176-740	Brass Assortment	£101.65	£96.30

## Feeler Stock In Roll With Dispenser Case



- Rewind feature permits retracting thinner feeler stock into the case, preventing damage
- Case provides the ability to snip off the desired length without any waste
- In a compact, sturdy plastic rewindable dispenser case handles stock up to 0.015"

Price Each

Order Code	Product Code		1+	3+
WX53637 ‡	666M-3	0.03mm	£56.17	£53.05
WX53638 ‡	666M-4	0.04mm	£41.61	£39.30
WX53639 ‡	666M-5	0.05mm	£41.61	£39.30
WX53640 ‡	666M-6	0.06mm	£41.61	£39.30
WX53641 ‡	666M-8	0.08mm	£41.61	£39.30
WX53642 ‡	666M-10	0.10mm	£41.61	£39.30
WX53643 ‡	666M-15	0.15mm	£41.61	£39.30
WX53644 ‡	666M-20	0.20mm	£35.58	£33.60
WX53645 ‡	666M-25	0.25mm	£35.58	£33.60
WX53646 ‡	666M-30	0.30mm	£35.58	£33.60
WX53647 ‡	666M-35	0.35mm	£35.58	£33.60
WX53648 ‡	666M-40	0.40mm	£33.05	£31.21
WX53649 ‡	666M-45	0.45mm	£33.05	£31.21
WX53650 ‡	666M-50	0.50mm	£39.90	£37.68
WX53651 ‡	666-1	0.001"	£52.42	£49.50
WX53652 ‡	666-1.1/2	0.0015"	£42.48	£38.73
WX53653 ‡	666-2	0.002"	£36.47	£34.44
WX53654 ‡	666-2.1/2	0.0025"	£36.47	£34.44
WX53655 ‡	666-3	0.003"	£36.47	£34.44
WX53656 ‡	666-4	0.004"	£36.47	£34.44
WX53657 ‡	666-5	0.005"	£34.43	£32.51
WX53658 ‡	666-6	0.006"	£34.43	£32.51
WX53659 ‡	666-7	0.007"	£34.43	£32.51
WX53660 ‡	666-8	0.008"	£28.46	£26.88
WX53661 ‡	666-9	0.009"	£28.46	£26.88
WX53662 ‡	666-10	0.010"	£28.46	£26.88
WX53663 ‡	666-11	0.011"	£28.46	£26.88
WX53664 ‡	666-12	0.012"	£28.46	£26.88
WX53665 ‡	666-13	0.013"	£28.46	£26.88
WX53666 ‡	666-14	0.014"	£28.46	£26.88
WX53667 ‡	666-15	0.015"	£28.46	£26.88
WX53668 ‡	666-16	0.016"	£27.86	£26.31
WX53669 ‡	666-17	0.017"	£27.86	£26.31
WX53670 ‡	666-18	0.018"	£27.86	£26.31
WX53671 ‡	666-19	0.019"	£27.86	£26.31
WX53672 ‡	666-20	0.020"	£29.84	£28.18
WX53673 ‡	666-21	0.021"	£29.84	£28.18
WX53674 ‡	666-22	0.022"	£29.84	£28.18
WX53675 ‡	666-23	0.023"	£29.84	£28.18
WX53676 ‡	666-24	0.024"	£29.84	£28.18
WX53677 ‡	666-25	0.025"	£29.84	£28.18

## Brass Thickness/Feeler Gauge



- Anti-magnetic brass leaves
- Nominal size marked
- Conical leaf 13 x 100mm
- Frame with locking screw
- Delivered in individual packages
- Sizes:

**5150-502:** 0.05–0.50 0.05 / 0.10 / 0.15 / 0.20 / 0.25 / 0.30 / 0.40 / 0.50

**5150-503:** 0.05–1.00 0.05 / 0.10 / 0.15 / 0.20 / 0.25 / 0.30 / 0.40–1.00

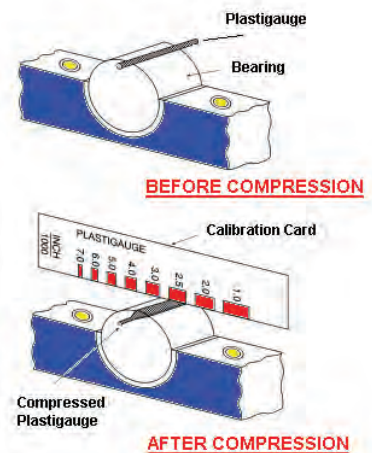
**5150-504:** 0.05–1.00 0.05 / 0.10–1.00

Price Each

Order Code	Product Code	Description	1+	3+
WX53627	5150-502	8 Leaves, 0.05–0.50	£6.08	£5.77
WX53628	5150-503	13 Leaves, 0.05–1.00	£9.38	£8.92
WX53629	5150-504	20 Leaves, 0.05–1.00	£14.18	£13.48

## Clearance Gauges

## Plastigauge



## PLASTIGAUGE

- This provides a simple but accurate method for measurement of running/static clearance between hidden surfaces, such as big end or mains bearings, pipe flanges, head gasket, high spots, housings, injection moulding tools etc.
- Can highlight, clearance, lobing, ovality on shafts
- Volumetric measurement takes surface roughness into account
- Calibration card supplied
- Clearance measurement 0.001 in. to 0.020 in. (0.025 to 0.5mm) can be taken
- Non-corrosive and oil soluble

			Price Each	
Order Code	Product Code	Description	1+	12+
WX38683	PL-A	0.001" - 0.007"	£33.59	£31.47
Range: 0.025 - 0.175mm				
WX38684	PL-B	0.004" - 0.010"	£52.49	£47.24
Range: 0.100 - 0.250mm				
WX38685	PL-C	0.007" - 0.020"	£52.49	£47.24
Range: 0.175 - 0.500mm				
WX38686	PL-D	0.020" - 0.040"	£52.49	£49.34
Range: 0.500 - 1.00mm				

#### Screw pitch gauges



## Roebuck NEW

- Will determine thread pitch of workpiece by matching blade teeth with thread
- Narrow designed blades permit use for internal and external threads, each blade is clearly marked with thread pitch, chosen blade can be locked in position for easy use
- All sets contain 28 blades and are protected in a sturdy steel case

Price Each				
Order Code	Product Code	Size range	Type	1+ 6+
WX61113	030131	4 - 12 Plus 11, 11-1/2, Imperial/13, 16, 20, 32, 40, 56, metric 0.5 - 2.0mm, 2.0 - 5.0mm Plus 6mm		£12.94 £12.29
WX61114	030132	0.25 - 0.9mm 1 - 2.0mm Plus 1.25, 1.75 & 2.5mm	Metric	£15.90 £15.11
WX61115	030133	4 - 14, 16 - 20, 20 - 48, Imperial 48 - 80 Plus 4-1/2, 11-1/2 & 27		£19.35 £18.38

#### Screwpitch Gauges Screw Pitch Gauges MW800 Series

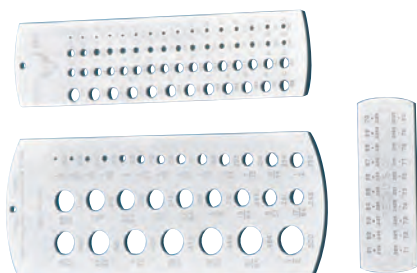


- Accurately milled steel blades
- Designed to check both internal and external thread forms
- Marked with nominal size on each blade
- All blades fixed in a steel sleeve
- Screw cutting gauge included
- Code 809: ISO Metric 22 Blades 0.35, 0.4, 0.45, 0.5, 0.6, 0.7, 0.75, 0.8, 1.0, 1.25, 1.5, 1.75, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0
- 60 Degrees
- Code 799: American National 30 Blades 4, 4.5, 5, 5.5, 6, 7, 8, 9, 10, 11, 11.5, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42
- Code 800: Whitworth 28 Blades Threads per mm: 4, 4.5, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48, 60
- 55 Degrees
- Code 806: Unified 30 Blades Threads per mm: 4, 4.5, 5, 5.5, 6, 7, 8, 9, 10, 11, 11.5, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42

			Price Each	
Order Code	Product Code	Description	1+	6+
WX53630	809	ISO Metric 22 Blades	£19.00	£18.00
WX53631	799	American National 30 Blades	£25.65	£24.30
WX53632	800	Whitworth 28 Blades	£20.90	£19.80
WX53633	806	Unified 30 Blades	£25.65	£24.30

## Drill Gauges

#### Drill Gauges



- Manufactured from hardened and ground steel
- Satin chrome finish

			Price Each	
Order Code	Product Code	Description	1+	3+
WX31784	5075	57 Holes 1 - 5.9mm	£26.41	£25.02
WX31785	5076	30 Holes 1.5 - 12.5mm	£26.41	£25.02
WX31780	5052	29 Holes 1/16 - 1/2"	£25.18	£23.85

## Thread Gauge Thread Plug Gauges



- Brammer can supply a comprehensive range of plug gauges
- Left hand threads and other tolerances are available at an additional cost

#### Thread Type

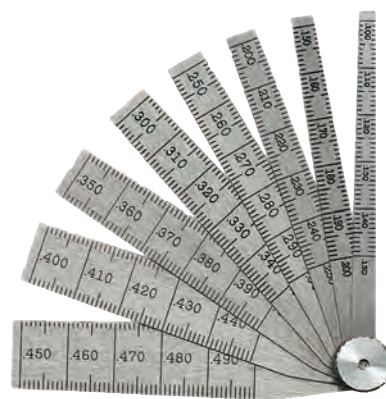
ISO metric threads DIN 13 < M 1.6  
ISO metric threads DIN 13 ≥ M 1.6  
Whitworth standard thread BS 84  
Whitworth fine thread BS 84  
Whitworth pipe thread DIN ISO 228  
Trapezoidal screw thread DIN 103  
Knuckle thread DIN 405  
UNC / UNF / UNEF thread ANSI (BS 919)

#### Plug Gauges Tolerance

5H  
6H  
medium class  
medium class  
Mittel / Medium  
7H  
7H  
2B

#### Taper Gauges

#### Starrett Taper Gauges Sets



## Starrett

- These are named "taper" gages only because of their shape
- They do not measure taper, but they do measure hole and slot sizes
- They are quick to use, very accurate, and are a convenient size
- These gages are for determining hole sizes in dies and all kinds of other work
- They are read in 0.02mm
- Made of tempered steel, with a locking device for fixing any leaf in position for use
- 269MA: 2-12mm Range, 64mm Length, 10 Leaves, 0.02mm graduation
- 269MB: 12-25mm Range, 70mm Length, 13 Leaves, 0.02mm graduation

			Price Each	
Order Code	Product Code	Description	1+	4+
WX42042	269MA	2-12 mm	£79.00	£77.00
WX42043	269MB	12-25 mm	£99.00	£96.00

#### Starrett Taper Gauges



## Starrett

- These are named "taper" gages only because of their shape
- They do not measure taper, but they do measure hole and slot sizes
- The Starrett No. 270 Taper Gage is a very useful tool, especially for bearing work and for gaging slots
- The gage is made of quality tool steel 7/16" (11mm) wide by 6 1/4" (160mm) long and is accurately tapered throughout its entire length for quick and convenient measuring of slot widths, etc
- Although a bit expensive, this tool can and has been used as a precision shim
- One side is graduated from .010" to .150" in thousandths of an inch and the reverse side from 0.3mm to 4mm in one-twentieth of a mm (0.05mm)
- 47 piece workshop grade

			Price Each	
Order Code	Product Code	Description	1+	4+
WX42044	270	Taper Gauge	£40.95	£39.38

**For a full range of  
hand tools, see our  
Hand Tools section**



## 47 pc Workshop Grade Gauge Block Set



## Roebuck NEW

- These sets are manufactured from specially selected high quality, age hardened, alloy steel and housed in a fitted wooden case
- All sets are supplied with a 5 point UKAS (Namas) certificate
- Qty 1, Range 1.005mm
- Qty 20, Range 1.01 - 1.20mm, Steps 0.01mm
- Qty 7, Range 1.30 - 1.90mm, Steps 0.10mm
- Qty 9, Range 1.00 - 9.00mm, Steps 100mm
- Qty 10, Range 10.00 - 100.00mm, Steps 10.00mm

Price Each

Order Code	Product Code	1+	6+
WX61116	030137	£360.00	£342.00

## Digital and Dial Indicators

### Metric dial test indicator



## Roebuck NEW

- Dial diameter 32mm
- Satin chrome indicator body with dovetail on all three sides
- Automatic reverse mechanism
- Adjustable bezel for easy reading, 250° lever position
- Fully jewelled movements
- 2mm diameter ball anvil stylus 14
- 5mm long
- Accuracy to DIN 22

Price Each

Order Code	Product Code	Graduation	Range	1+	6+
WX61117	032115	0.01 mm	0 - 0.8mm	£52.65	£50.02

## Digital Indicators

### Digital Dial Indicators



## Roebuck NEW

- This electronic indicator combines the ease of digital reading with the applications of standard plunger dial indicators
- Dial diameter 60mm, with 8mm stem and lug back mounting, 3 button operation: on/off switch, imperial/metric conversion
- ± 0.03mm accuracy
- Resolution 0.01mm/0.0005in

Price Each

Order Code	Product Code	Range	1+	6+
WX61118	030578	10 mm / 0.4 in	£50.75	£48.21

### Digital Indicators 405 Series



- Direct Inch / Metric conversion
- 58mm dial face
- Lugback and 8mm stem mountings
- Resolution 0.01m/0.0005"
- Absolute / Incremental reading
- Floating Zero

Price Each

Order Code	Product Code	Description	1+	3+
WX44015	MW405-04DB	0 - 12.7mm / 0.5"	£51.50	£49.96
Accuracy: 0.02mm/0.0008"				
WX44016	MW405-06DB	0 - 25.0mm / 1.0"	£63.00	£61.11
Accuracy: 0.03mm/0.0012				

### ABS Digimatic Indicator Series 543



- Patented worldwide; the ABSolute Precision Function from Mitutoyo explained:-
- Calipers equipped with this system may operate and measure without having to start all over again at the zero point each time. You yourself establish the zero reference thus being able to display the absolute value of the measured length at each point. Which means in other words; you start at the zero point just once - this point will automatically be 'kept in mind' by the measuring instrument all the time .... even if its been switched off in between
- Tolerance setting
- Data output
- Magnified judgement results
- Large LCB display is easy to read and rotates through 330°
- Metric / Imperial conversion
- Data output

Price Each

Order Code	Product Code	Description	1+	3+
WX20365	543-251B	12.7mm	£280.05	£273.39
Resolution: 0.001mm, Accuracy: 0.003mm				

### IDU ABS Digimatic Indicator



- Patented worldwide; the ABSolute Precision Function from Mitutoyo explained:-
- Calipers equipped with this system may operate and measure without having to start all over again at the zero point each time
- You yourself establish the zero reference thus being able to display the absolute value of the measured length at each point. Which means in other words; you start at the zero point just once - this point will automatically be 'kept in mind' by the measuring instrument all the time .... even if its been switched off in between
- Slim compact low cost design
- Metric / Imperial conversion
- Zero setting anywhere
- Data output
- Battery life approximately 1 years continuous use

Price Each

Order Code	Product Code	Description	1+	3+
WX20368	575-123	25mm	£138.60	£134.44
Resolution: 0.01mm				

### Standard Digimatic Indicator Series 543



- Compact economical Digital Indicator which can easily replace analog equivalents
- Large LCD display
- Metric / Imperial conversion
- Zero setting

Price Each

Order Code	Product Code	1+	3+
WX20366	543-682	£102.38	£99.30
Range: 12mm, Resolution: 0.01mm, Accuracy: 0.02mm			



## Dial Indicators

### 40mm Dial Indicators



## Roebuck NEW

- Dial size 40mm (1-9/16 in)
- Fitted with standard lug back and 8mm diameter stem, hardened and ground rack adjustable dial, bezel lock and tolerance pointers

Price Each

Order Code	Product Code	Graduation	Reading, Travel display	Travel per revolution	1+	6+
WX61119	030677	0-100	0.01mm 5 mm	1 mm	£24.70	£23.47
WX61120	030568	0-100	0.001in 0.25 in	0.1 "	£24.70	£23.47

### 60mm Dial Indicators



## Roebuck NEW

- Dial size 60mm/ 2-1/4 in diameter
- Fitted with standard lug back fitting, hardened and ground racks, adjustable dial, bezel lock and tolerance pointers

Price Each

Order Code	Product Code	Scale Divisions	Record Length	Travel Per Revolution	1+	6+
WX61121	032112	0.01	10.0 mm	1.0 mm	£22.33	£21.21
WX61122	032113	0.01	25.0 mm	1.0 mm	£34.51	£32.78

### 60mm Dial Indicators Imperial



## Roebuck NEW

- Dial size 2-1/4 in diameter
- Fitted with standard lug back fitting, hardened and ground racks, adjustable dial, bezel lock and tolerance pointers

Price Each

Order Code	Product Code	Graduation	Reading, Travel display	Travel per revolution	1+	6+
WX61123	032110	0 - 100	0.001 in	0.5 in	£22.33	£21.21
WX61124	032111	0 - 100	0.001 in	1.0 in	£24.33	£23.11

### Dial indicators - long travel



## Roebuck NEW

- Dial size 75mm (3in)
- Fitted with standard lug back and 8mm diameter stem, hardened and ground rack adjustable dial, bezel lock and tolerance pointers

Price Each

Order Code	Product Code	Graduation	Reading, Travel display	Travel per revolution	1+	6+
WX61125	030569	0-100	0.01mm 50 mm	1 mm	£81.33	£77.26
WX61126	030570	0-100	0.001in 2 in	0.1 "	£80.85	£76.81

### Shock proof dial indicator



## Roebuck NEW

- Shockproof mechanism disengages the gear assembly from the rack, when the gauge spindle is exposed to sudden impact
- Bezel diameter 60mm
- Measuring range 10mm
- Graduated 0.01mm
- Scale reading 0-100
- Adjustable dial & bezel lock
- Tolerance pointers
- Central lug back and 8mm stem

Price Each

Order Code	Product Code	1+	6+
WX61127	9848070	£27.38	£26.01

## Dial Indicators

### Dial Indicators



- Housings machined from solid brass
- 58mm face diameter
- Lapped stainless steel spindle and stem
- Robust design to suit workshop use
- Unbreakable Plexi-glass face

Price Each

Order Code	Product Code	Description	1+	3+
WX32104	DIP-222M	0 - 10mm	£33.50	£32.50
Graduation: 0.01 mm				
WX32105	DIP-232E	0 - 0.4"	£33.50	£32.50
Graduation: 0.001"				

### Dial Indicator



- Standard: DIN 878
- Satin-chromed body
- With Tungsten carbide measuring tip
- Shockproof
- Tolerance indicators
- Supplied with lug back
- Packed in foam box

Price Each

Order Code	Product Code	Description	1+	3+
WX38682	M400-06	0 - 10mm	£35.50	£34.44
Graduation: 0.01mm				

**Can't see it here,  
just call  
0870 240 2100**

## Dial Indicators Series 1



**Mitutoyo**  
Available ✓

- Constructed from aluminium channel sections and fitted with serrated non-slip treads
- Large non-slip platform
- Handrail not supplied as standard
- When handrails are supplied they are supplied separately for easy use

Price Each

Order Code	Product Code	Description	1+	3+
WX20333	1044F	Metric	£36.75	£35.65
Graduation: 0.01 mm, Range: 5mm				
WX20321	1411S	Imperial	£62.16	£60.30
Graduation: 0.001 in, Range: .25 in				

## Dial Indicators Series 2



**Mitutoyo**  
Available ✓

- Conventional size easy to read indicator for most general applications
- Metric/Imperial options available
- Mitutoyo's most popular size Dial Indicator

Price Each

Order Code	Product Code	Description	1+	3+
WX20353	2046S	Metric	£31.92	£30.96
Graduation: 0.01 mm, Range: 10mm				
WX20354	2414S	Imperial	£59.96	£58.16
Graduation: 0.001 in, Range: 0.5 in				

- High sensitivity and quick response from jewelled bearings
- Non clutch type for automatic reversal of measuring direction
- Metric/Imperial option available

Price Each

Order Code	Product Code	Description	1+	3+
WX20362	513-402	Imperial	£72.87	£70.68
Graduation: 0.0005 in, Range: 0.03 in				
WX20363	513-404E	Metric	£73.08	£70.89
Graduation: 0.01mm, Range: 0.8mm				

## Dial Indicators Plunger type



- 60mm diameter dial face
- Adjustable dial
- Bezel lock and tolerance pointers
- Scale reading 0 - 100mm
- Lug back & 8mm stem

Price Each

Order Code	Product Code	Description	1+	3+
WX31809	DG-M	Metric	£21.28	£20.16
Graduation: 0.01mm, Range: 10mm				
WX31808	DG-25M	Metric	£34.11	£32.31
Graduation: 0.01mm, Range: 25mm				
WX31806	DG-1/2S	Imperial	£21.28	£20.16
Graduation: 0.001", Range: 1/2"				
WX31807	DG-1S	Imperial	£23.28	£22.05
Graduation: 0.001", Range: 1"				

## Shock Proof Dial Indicators



- Adjustable dial and bezel lock
- Hardened and ground racks
- Lug back fitting
- Tolerance pointers
- Shockproof mechanism disengages the gear assembly from the rack, when the gauge is exposed to sudden impacts
- Central lug back and 8mm stem
- Scale reading 0-100

Price Each

Order Code	Product Code	Description	1+	3+
WX35127	DG-MSP	Metric	£28.03	£26.55
Graduation: 0.01 mm, Range: 0 - 10mm				

## Dial Indicator Kits

### Magnetic base & dial indicator kit



## Roebuck NEW

- Magnetic base specifications: Magnetic base with solid cross arm
- Plunger indicators held by lug back or 8mm diameter stem
- Lever indicators held by spigot
- Overall height 230mm
- Switchable magnet has 40kg pull
- Dial indicator specifications: Adjustable dial
- Bezel diameter 60mm
- Hardened and ground racks
- Bezel lock
- Lug back fitted
- Tolerance pointers
- Travel 10mm
- Resolution 0.01mm

Price Each

Order Code	Product Code	1+	6+
WX61128	1370735	£54.15	£51.44

## Magnetic Bases

### Magnetic Base Dial Indicator Stand



## Roebuck NEW

- Overall height 230mm,
- Supplied with fine adjustment arm
- Main post 12mm diameter,
- Main post body clamp 12mm,
- Base size 45mm x 70mm x 50mm

Price Each

Order Code	Product Code	1+	6+
WX61129	030498	£32.77	£31.13

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## Dial Indicators Series 513



**Mitutoyo**  
Available ✓

- Ideal for use where access is restricted, or for comparative measurements with stand
- 39mm face diameter, scratch resistant glare free crystal

Test & Measurement

## Magnetic base with snake arm



## Roebuck NEW

- Provides clamping for plunger and lever indicators with spigots and stems between 1/8" and 1/2" diameter
- Flexible arm can be locked in any position by means of one lever
- Flexible arm fitted to ON/OFF switching magnet with 80 kilo pull
- Indicator not inc

Price Each

Order Code	Product Code	1+	6+
WX61130	9848088	£44.77	£42.53

## Fine Adjustment Magnetic Base



## Roebuck NEW

- Medium duty push button magnetic base,
- Three precision ground contact surfaces,
- Base dimensions: L:48, W:40, H:50mm,
- Clamping force: 290(N),
- Upright: ø12mm chrome plated steel,
- Cross arm: ø10mm chrome plated steel

Price Each

Order Code	Product Code	1+	6+
WX61131	1370740	£45.90	£43.61

## Magnetic Stands

### Mini Magnetic Stand



## Mitutoyo

- Mini Magnetic Stand for applications with restricted access
- Permanent magnet with 15kgf magnetic pull
- Ideal for test indicators with 6mm or 8mm stems or dovetail fitting

Price Each

Order Code	Product Code	1+	3+
WX20322	7014	£54.08	£52.45

### Standard Magnetic Stand Series 7



## Mitutoyo

- Standard magnetic stand with cross arm
- On/off switch to release the magnet
- Suitable for stem diameters of 4.5mm, 8mm and 3/8 inch
- 60kgf magnetic pull

Price Each

Order Code	Product Code	1+	3+
WX20370	7010SN	£59.12	£57.34

## Magnetic Base Stands



## NOGA

- Plunger indicators held by lug back or 8mm stem
- Lever indicators held by spigot
- Overall height 230mm
- Switchable magnetic base has 80 kilo pull
- Base size: 57 x 51 x 62mm

Price Each

Order Code	Product Code	Description	1+	3+
WX31813	MB-1	Solid Cross Arm	£30.02	£28.44
WX31814	MB-2	Fine Adjust	£32.11	£30.42

## Mighty Magnetic Base



## LTL

- Universal magnetic base
- Strong magnet with 45lbs of pulling power
- Zinc die cast housing
- 5 different locations for mounting accessories
- Clamps up to 8mm / 3/8" stems

Price Each

Order Code	Product Code	Description	1+	3+
WX35128	UMB-1	Mag Base	£7.89	£7.47

**We can supply  
the entire range.  
If you can't see  
it here, just call  
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Test & Measurement



## Height Gauges

## Vernier Height Gauges

### Vernier height gauges



## Roebuck NEW

- Beam and slide manufactured from hardened stainless steel
- The main and vernier scales are satin chrome with the sliding scale raised to prevent wear
- The gauge has a fine adjustment mechanism with a carbide tipped scriber
- Imperial and metric readings

				Price Each	
Order Code	Product Code	Graduation	Range	1+	6+
WX61132	033673	0.02mm/0.001in	300mm / 12"	£146.91	£139.56
WX61133	030127	0.02mm/0.001in	600mm / 24"	£216.00	£205.20

## Electronic

### Electronic Digital Height Gauge



## Roebuck NEW

- Robust single column construction
- Clear LCD display with 14mm digits
- Hand wheel allows easy movement of measuring head
- Fine adjustment mechanism
- Contoured base provides improved handhold
- Tungsten carbide tipped scriber
- 5 Button operations:
- OFF: Power Off

ON/ZERO: Power on/Zero Set  
MM/Inch: MM/Inch Conversion  
ADD+: Preset Plus  
SUB: Preset Minus  
Measuring Range: 300mm/12" & 600mm/24"  
Resolution: 0.01mm/0.0005"  
Repeatability: 0.01mm

				Price Each	
Order Code	Product Code	Range, measuring max	1+	6+	
WX61134	1370727	300mm / 12"	£275.49	£261.72	
WX61135	1370731	600mm / 24"	£419.21	£398.25	

## Digital Height Gauge

### Digital Height Gauge



- Heavy duty beam
- Handwheel for ease of use
- ABS/INC measurement
- Large LCD display
- Inch/mm conversion
- Positive lock carbide scriber
- Supplied in moulded case

Order Code	Product Code	Description	1+	3+
WX44017 ‡	M191-30DAB	300mm (12")	£291.00	£282.27
Resolution: 0.01mm/0.0005"				
WX44018 ‡	M191-60DAB	600mm (24")	£384.50	£372.97
Resolution: 0.01mm/0.0005"				

### Digimatic Height Gauge Series 570



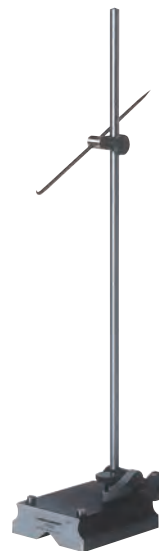
- Robust construction with thick column, provides highly repeatable measurements and stability
- Fine adjustment
- Clear LCD screen for error free reading
- Metric / Imperial conversion

- Zero setting anywhere
- Data output

		Price Each	
Order Code	Product Code	1+	3+
WX20367	570-245	POA	POA
Range: 300 mm, Resolution: 0.01 mm			

## Surface Gauges

### Surface Gauges



- Designed for precise marking out operations
- Hardened & tempered steel base, ground on one end and bottom face
- Vee groove for locating on cylindrical workpieces
- One handed fine adjustment
- Two retractable locating pin, supplied with 2 interchangeable pillars and one 4mm diameter scriber (code:10112)
- E101B : Base size: 80mm x 65mm, pillar height: 225mm & 300mm
- E102B : Base Size: 105mm x 85mm, pillar height: 300mm & 450mm

				Price Each	
Order Code	Product Code	Description	1+	3+	
WX38678 ‡	E101B	Small	£92.63	£87.75	
WX38679 ‡	E102B	Large	£143.45	£135.90	

## Timers

### Stopwatch 7.2mm Digit



- 7.2mm Digit Stopwatch
- 1/100 sec. precision with lap counter (for first 30 minutes)
- Calendar & time (12/24-hour format)
- Daily alarm and hourly chime
- Big digit display (digit height 7.2mm)
- Impact-resistant ABS case size: 64 x 53 x 19mm
- Supplied with battery and neck cord

				Price Each	
Order Code	Product Code	Description	1+	7+	
WX38587	TM-136	Stopwatch	£2.75	£2.64	

## Inspection & Testing

## Metal & Wire Detection

### Cable Detector



- The Fluke 2042 is a professional general purpose cable locator
- It is ideal for tracing cables in walls and underground, locating fuses/breakers on final circuits and locating interruptions and short-circuits in cables and electrical floor heating systems
- It can also be used for tracing metallic water and heating pipes
- The unit is supplied as a complete kit comprising of a transmitter and receiver in a purpose-made carry case
- For all applications (live or dead cables) without additional instruments
- Proven digitally coded sender signal guarantees clear signal identification
- Transmitter with LCD-display for transmitting level, transmitting code and external voltage
- Receiver with a backlight LCD-display for level of receiving signal, code of receiving signal and live voltage indication
- Automatic or manual adjustment of receiving signal sensitivity
- Switchable acoustic receiving signal and Auto-Power-Off
- Additional torch lamp function for working in dark environments
- Additional transmitters are available for extension or to distinguish between several signals
- Batteries transmitter: 6 pc batteries 1.5V
- Included accessories:
  - TL27 Heavy duty test lead set (2)
  - TP74 Lantern tip test probe set
  - AC285 alligator clip set
  - Soft carrying case & a hard case

Product:	Transmitter
Voltage Measurement Range	12V 50V 120V 230V 400V
Frequency Range	0..60Hz

Output signal	125 kHz
Voltage	Up to 400V AC/DC
Batteries	6 pc Batteries 1.5V
Size	190 x 85 x 50 mm

Product:	Receiver
Tracing depth cable location	0-2.5m wall/underground cables
Main voltage detection	0-0.4m
Batteries	1 pc Battery 9V
Size	250 x 65 x 45mm

Price Each

Order Code	Product Code	1+	4+
WX38632	FLUKE-2042	£533.00	£515.81

## Inspection

### Video Borescope/Wireless Inspection Camera



- 9mm camera diameter and 3.5" Colour TFT LCD Wireless Monitor
- Includes 2GB microSD memory card for capturing images (JPEG) or video (AVI) for viewing on your PC
- Detachable wireless colour display can be viewed from a remote location up to 32ft (10m) from measurement point
- 39" (1m) flexible goose-neck with waterproof camera (9mm diameter) and 4 built-in bright LED lights for illuminating dark areas
- Captured videos and images can be viewed on the wireless monitor or transferred to your PC via the microSD card or USB cable
- Menus in 10 languages: English, Chinese, German, French, Spanish, Portuguese, Italian, Japanese, Dutch, and Russian
- Complete with 4AA batteries, rechargeable display battery, microSD card with adaptor, USB and video cable, extension tools, 100-240V AC adaptor, stand and case
- Additional accessory of a 38" (0.96m) cable for increasing Viewing distance is available for purchase
- 19mm Diameter connector
- Maximum 2 extension cables can be connected to the borescope

Price Each

Order Code	Product Code	Description	1+
WX53586 ‡	BR250	Borescope	£264.00
WX53587 ‡	BR200-EXT	0.9m Extension Cable	£45.00

‡ Special delivery applies. Please ask for details

### Endoscope TKES 1



The SKF Endoscope TKES 1 is a compact handheld instrument with a 3.5" TFT LCD screen which has the capacity of viewing, storing and reviewing still and video images. This is the perfect inspection tool to save time by reducing the need to disassemble items.

- Flexible insertion tube with miniature camera (1 metre - 3.3ft) - 5.5mm tip
- Powerful LED lighting
- 1GB SD memory card can store 30,000 images or 4-5 hours of video
- Images and video can be transferred to PC using the USB cable provided
- 67° field of view offers an excellent viewing range
- Supplied complete with all cables, universal mains charger and carrying case

Price Each

Order Code	Product Code	Description	1+
WX43941 ‡	TKES1	Endoscope	£796.81

‡ Special delivery applies. Please ask for details

**We provide access to technical expertise through your local Sales and Service Centre and authorised suppliers**

## Endoscope TKES 10 Series



First Line inspection tool for internal inspection of Machinery  
Endoscope with semi-rigid tube  
Endoscope with 2 way articulation

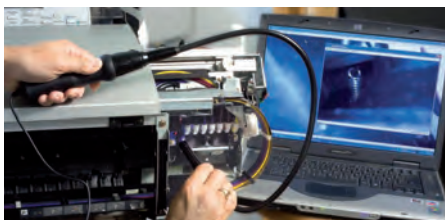
- SKF Endoscopes TKES 10 series are first line inspection tools that can be used for internal inspection of machinery. They help minimise the need to disassemble machinery for inspection, saving time and money. The compact display unit, with 3.5" backlit screen, allows images and video to be saved and recalled, or to be downloaded and shared with others. Three different models cater to most needs and are equipped with powerful variable LED lighting allowing inspections in dark locations. High resolution miniature camera, with up to 27x digital zoom, gives a clear and sharp full screen image.
- Available with a 1 metre (3.3 ft) insertion tube in three different variants; flexible, semi-rigid or with an articulating tip.
- Small tip diameter of 5.8 mm (0.23 in.), with a wide field of view, allows easy access to most applications.
- Supplied with a side view adapter allowing inspection of applications such as pipe walls.
- Powerful magnets, and a tripod mount on the back of the display unit, allow the display unit to be used "hands free".
- Up to 50 000 photos or 120 minutes of video can be stored on the SD memory card supplied.
- Longer flexible and semi-rigid insertion tubes are available as accessories.  
Supplied in a sturdy carrying case complete with all necessary cables, universal mains charger and cleaning kit.

Price Each

Order Code	Product Code	Description	1+
WX61136 ‡	TKES-10F	Endoscope with Flexible Tube	£652.20
WX61137 ‡	TKES-10S	Endoscope with Semi Rigid Tube	£652.20
WX61138 ‡	TKES-10A	Endoscope with Articulating Tube	£1,043.52

‡ Special delivery applies. Please ask for details

## Industrial USB Endoscope



- The USB Endoscope is ideal for inspecting areas that are hard to access and for the diagnosis of maintenance and repair problems:
  - inspect air ducts, ventilators, machinery, engines and motors
  - locate piping under floorboards and in wall cavities
  - check filters and dampers in ducting
  - check corrosion, friction wear or damage to internal components
  - security inspections and customs & excise checks
- Robust and ergonomically designed digital video endoscope
- Flexible "gooseneck" probe adjusts easily to the shape required then remains rigid for one-handed use
- Focus wheel and snapshot button on the handle allow easy operation
- Waterproof camera head and cable
- Clip-on magnet attachment for recovery of small metal objects
- Excellent visibility with adjustable white LED lights
- High quality video and still images
- After connection to your PC or laptop the endoscope allows you to see real-time video on your computer screen and to record and save video files
- Still images can be taken at the touch of a button, displayed on the computer screen and saved easily
- Images and videos can be used in service reports to customers
- Image processing software runs on Windows 98, ME, 2000, XP & Vista
- Power is supplied by the computer's USB port. No batteries required
- Supplied with image processing software, magnet attachment and carry case

### Technical Specifications

Lens 14mmØ, F#2.8, 54°angle of view  
Focal distance 60mm to infinity  
Camera 300K  
Resolution 640 x 480 pixels  
Picture rate Up to 30fps VGA  
Dimensions 880mm x 8.5mmØ gooseneck probe, 2m USB cable

Price Each

Order Code	Product Code	Description	1+
WX45613 ‡	ENDS-USB1	Endoscope	£57.50

‡ Special delivery applies. Please ask for details

## Video Borescope



- This portable video Borescope is designed as a remote inspection device, capable of recording video and taking still images. It is ideal for use in surveying pipes or other hard-to-reach places, equipment or furnishing installation, car repair etc. Features include IP67 water-proof 1m gooseneck and 9mmØ

camera lens, real-time recording, and micro SD card storage. It has a 70mm TFT colour display. The instrument can accept any micro SD card (not supplied) from 2GB up to 32GB, to capture still images (JPEG) or video (NTSC/PAL) for download to PC or laptop with date and time stamp. This can then be saved and used as attachments to emails or reports.

- 70mm TFT colour display 640 x 480 pixels
- Picture zoom function up to 3x standard
- Water-proof IP67 9mmØ camera head
- Glare free close-up and wide field of view
- PAL video output and cable
- 4 adjustable dual bright white LED lights
- 1m flexible gooseneck can be pre-formed to a configured shape
- Clip-on mirror, magnet and hook attachments for object retrieval
- The AVB-48 optional camera is HD format, giving Hi-contrast and exceptionally clear images.
- Supplied with 1m gooseneck and 9mmØ camera lens, USB download cable, AV video out cable, clip on mirror, magnet and hook attachments and carry case.
- Requires 4 AA Batteries

### Technical Specification

- Focus Range 150 to 2,500mm to infinity
- Resolution: 640 x 480 pixels (colour LCD)
- Power: 4 x 1.5V AA Alkaline Batteries (ALR-6)
- Dimensions: 263 x 86 x 49mm (unit), 1m gooseneck, 9mmØ camera
- Weight: 420g
- Video Format: NTSC / PAL

Price Each

Order Code	Product Code	Description	1+
WX54208 ‡	VB-8823	Boreoscope	£175.00
WX54209 ‡	VB-48	5.8mmØ HD Gooseneck Camera	£125.00
WX54210 ‡	EXT-1	1m Gooseneck Extension	£25.00

‡ Special delivery applies. Please ask for details

## Flexi Inspection Camera



- This state-of-the-art camera with a 2.4" TFT LCD colour viewing screen and 1M flexible probe with a 10mm diameter camera head illuminated by six high power LED's together give a picture of areas that are difficult to see with the naked eye - i.e. inside of cylinder chambers, vehicle door spaces, corrosion checks and many other uses in the automotive workshop
- Features a PAL video-out connection cable to allow real-time viewing or video recording
- Powered by four AA batteries (supplied separately)

Price Each

Order Code	Product Code	Description	1+
WX53579 ‡	13828	Inspection Camera	£146.00

‡ Special delivery applies. Please ask for details

## USB Video Borescope with Wireless Display



NEW

- This portable video Borescope comes with a 90mm (3.5") TFT wireless colour display
- The 9mmØ camera and 1m flexible gooseneck are water-resistant
- Using a 2GB microSD card (Not Supplied) can captures still images (JPEG) or video (AVI) for download to a PC or laptop with a date and time stamp.



- These can then be saved and used as attachments to emails or reports.
- 90mm (3.5") TFT wireless colour display (up to 10m Transmission)
- Water-resistant IP-67 9mmØ camera head
- Glare free close up and wide field of view (45°) 4 Adjustable dual bright white LED lights
- 1m flexible gooseneck can be preformed to a configured shape
- Clip-on mirror, magnet and hook attachments for object retrieval
- PAL video output and cable
- The VB-48 optional camera is HD Format giving Hi-Contrast and exceptionally clear sharp images
- Supplied with 1m gooseneck 9mmØ camera, USB download cable, AV out cable, clip-on mirror, magnet and hook attachments, carry case and AC/DC mains power charger
- ACCESSORIES
  - EXT-1 1m Flexible Gooseneck Camera Extension
  - VB-48 5.8mmØ HD Gooseneck Camera
- Technical Specifications
  - Focus Range 150 to 2,500mm to infinity
  - Video Format PAL
  - Resolution 640 x 480 pixels (colour LCD)
  - Power 4 x 1.5V AA Alkaline Batteries (LR-6)
  - AC/DC Mains Power Charger (Display)
  - Dimensions 185 x 145 x 40mm (Unit) 1m Gooseneck, 9mmØ Camera
  - Weight 525g

Price Each

Order Code	Product Code	Description	1+
WX61139 ‡	VB-8803	Borescope	£195.00
WX54209 ‡	VB-48	5.8mmØ HD Gooseneck Camera	£125.00
WX54210 ‡	EXT-1	1m Gooseneck Extension	£25.00

‡ Special delivery applies. Please ask for details

#### Colour Video Borescope with 9mm Camera Head



NEW

- This portable Borescope is designed as a remote inspection device. It is ideal for use in surveying pipes or other hard-to-reach places, equipment or furnishing installation, car repair, etc
- Features include IP67 waterproof 1m gooseneck and 9mmØ camera lens. It has a 60mm (2.4") TFT colour display

- 60mm (2.4") TFT colour display 480 x 234 Pixels
- Water-Proof IP-67 9mmØ camera head
- Glare free close up and wide field of view (36°)
- 8 Contrast settings
- 4 way rotation of picture on screen
- 4 Adjustable dual bright white LED lights
- 1m flexible gooseneck can be preformed to a configured shape
- Clip-on mirror, magnet and hook attachments for object retrieval
- The VB-48 optional camera is HD Format giving Hi-Contrast and exceptionally clear sharp images
- Supplied with 1m gooseneck 9mmØ camera, clip-on mirror, magnet and hook attachments. Requires 4 x AA batteries.

#### ACCESSORIES

- EXT-1 1m Flexible Gooseneck Camera Extension (Max 3)
- VB-48 5.8mmØ HD Gooseneck Camera

#### Technical Specifications

- Focus Range Up to 1.5m
- Resolution 480 x 234 pixels (colour LCD)
- Power 4 x 1.5V AA Alkaline Batteries (LR-6)
- Dimensions 201 x 83 x 59mm (Unit) 1m Gooseneck, 9mmØ Camera
- Weight 385g

Price Each

Order Code	Product Code	Description	1+
WX61140 ‡	VB-8805	Borescope	£120.00
WX54209 ‡	VB-48	5.8mmØ HD Gooseneck Camera	£125.00
WX54210 ‡	EXT-1	1m Gooseneck Extension	£25.00
WX61141 ‡	C-3	Briefcase Style Carry Case	£47.60

‡ Special delivery applies. Please ask for details

#### Inspection Mirror & Pick-up Kit



**Roebuck** NEW

- Kit containing:
  - 1x telescopic mirror 150-500mm range
  - 1x telescopic magnetic pick-up

Price Each

Order Code	Product Code	1+	6+
WX61142	1248901	£5.91	£5.61

#### Telescopic Magnetic Pick-up With LED Light



**Roebuck** NEW

- Telescopic magnetic pick-up with extension range of 190mm-810mm
- Magnet is capable of lifting up to 1.5kg/3.3lbs
- Bright LED light through magnet centre giving 360-degree illumination
- Non-slip moulded handle for oily or wet hands

Price Each

Order Code	Product Code	1+	6+
WX61143	1248902	£6.70	£6.37

#### Illuminated Pick-up Tool With Mirror



**Roebuck** NEW

- This product has been designed for viewing inaccessible and poorly lit areas
- The set consists of a 350mm flexible, semi-rigid chrome plated shank fitted threaded boss, which retains 1 of 3 mirrors provided (14 & 23 magnifying, 30mm diameter and plain, all set on a 25mm arm)
- The illumination is powered by AA batteries (not included)
- The set also includes a threaded magnetic pick-up that can be used instead of a mirror

Price Each

Order Code	Product Code	1+	6+
WX61144	1248899	£24.38	£23.16

#### Telescopic Pick-up with Light and Mirrors



**Roebuck** NEW

- Ideal for all kind of inspection work The Set Contents: 1 x Handle complete with Torch, Extending Aluminium Shaft and Magnetic side panel Handle length: with shaft in closed position 190mm, shaft extended 870mm 3 x Viewing Mirrors manufactured from lightweight, tough silvered plastic: 18 x 60mm, 45 x 68mm and 60 x 90mm 1 x Plastic Magnifier 2 x Magnetic Pickup Heads: 12mm & 20mm diameter

Price Each

Order Code	Product Code	1+	6+
WX61145	2017411	£28.84	£27.40

#### Inspection Mirror 55mm Diameter



**Roebuck** NEW

- This telescopic mirror has fully chromed telescopic shaft and articulated mirror mount
- Mirror can be set in any position for best viewing
- Specifications:-
  - Mirror diameter: 50mm
  - Fully extended length: 780 mm
  - Fully folded length: 200mm Handle:
  - Plastic grip 14mm diameter x 120mm long

Price Each

Order Code	Product Code	1+	6+
WX61146	2017410	£11.88	£11.29

#### 470mm Flexible Shaft Inspection Mirror



**DRAPER**

- Fully flexible shaft and fixed head with mirror 55mm diameter to give good visibility in concealed areas
- Plated finish with plastic grip
- Display packed

Price Each

Order Code	Product Code	Description	1+	6+
WX35102	11954	470mm Mirror	£8.64	£8.13

#### 560mm Flexible Magnetic Pick-Up Tool



**DRAPER**

- Expert quality, chrome plated flexible shaft with plastic handle
- Removable protective cap over magnet
- Display packed

Price Each

Order Code	Product Code	Description	1+	6+
WX35104	52305	Pick-Up Tool	£11.66	£10.98

## Stethoscope



**DRAPER**

- Suitable for detecting faults in engines, bearings and other moving parts
- Supplied complete with two probes 290mm long

Price Each

Order Code	Product Code	Description	1+	6+
WX38620	54503	Stethoscope	£16.90	£15.90

## Magnification

### Illuminated Eye Loupe



**Roebuck** **NEW**

- Black finished illuminated LED eye loupe
- 10x magnification
- Adjustable position bright LED light with on/off button

Price Each

Order Code	Product Code	1+	6+
WX61147	1248897	£9.95	£9.45

### Pocket Magnifier Series 183



**Mitutoyo**

- Clear loupe pocket magnifier
- Handy instrument for localised magnification
- Available in:
- Slim pattern 25X
- Standard 25X
- Standard 50X

Price Each

Order Code	Product Code	Description	1+	3+
WX20347	183-201	25X slim	£66.15	£64.17
WX20348	183-202	25x	£135.45	£131.39
WX20349	183-203	50x	£144.90	£140.55

## Professional Swing Arm Magnifying Lamp



**Clarke**  
POWER PRODUCTS

- Spring balanced arms and locking knobs allow unit to be secured in any position
- Powerful 3 diopter lens (120mm diameter) gives excellent magnified viewing of intricate detail
- 22 Watt circular fluorescent tube illuminates the subject (230V)

Price Each

Order Code	Product Code	Description	1+	6+
WX35101	5460530	Mag Lamp	£44.17	£42.40

### Folding Lens Magnifier



**Roebuck** **NEW**

- Provides high quality distortion free magnification
- Bonded 3 lens "Hastings Triplet" construction
- Lenses are recessed to protect from damage
- Swing away lenses are housed in polished chrome plated body
- Supplied with a leather case for added protection

Price Each

Order Code	Product Code	Magnification	1+	6+
WX61148	030157	10	£21.65	£20.57
WX61149	030158	10, 15	£37.48	£35.61
WX61150	030159	10, 15, 20	£56.70	£53.87

### Hastings Triplet Type Magnifier



**LTL**

- High quality distortion free magnification
- Single lens 21mm/10x mag
- Double lens 18mm/10x mag + 12mm/15x mag
- 3 lens type 18mm/10x mag + 18mm/15x mag + 18mm/20x mag
- Magnification, Triple Magnifier

Price Each

Order Code	Product Code	Description	1+	6+
WX35121	59-600-111	10X Mag	£23.75	£22.50
WX35122	59-600-222	10X & 15X Mag	£41.04	£38.88
WX35123	59-600-333	10X, 15X & 20X Mag	£61.56	£58.32

## Hand Magnifier



**Roebuck** **NEW**

- The magnifier has a ground glass lens 60mm diameter
- The focal length is 100mm

Price Each

Order Code	Product Code	Magnification	1+	6+
WX61151	030155	2.5	£3.71	£3.52

### Hand held magnifier



**Roebuck** **NEW**

- A robust hand-held magnifier with 5x magnification
- Glass lens size 75mm diameter

Price Each

Order Code	Product Code	1+	6+
WX61152	1248895	£4.64	£4.41

### Round Magnifiers



**DRAPER**

- Plastic lightweight magnifiers ideal for engineers, philatelists, etc
- Main lens magnification x 3 with inset x 6.
- Display packed

Price Each

Order Code	Product Code	BrammerRef	Lens x Length	1+	6+
WX53580	78474	DRAPER-78474	50mm x 125mm	£4.71	£4.43
WX53581	78475	DRAPER-78475	65mm x 150mm	£5.51	£5.18
WX53582	78476	DRAPER-78476	70mm x 180mm	£7.23	£6.80

## Head Bands

### LED headband magnifier & 4 lenses



## Roebuck NEW

Ideal for close-up precision work, leaving your hands free. This fully adjustable headband includes 4 interchangeable optical lenses and detachable triple LED spotlight with magnetic base. For professional, craft, hobby or DIY projects that demand close-up work. A fully adjustable tough plastic headband which includes 4 precision ground interchangeable lenses, covering all focal lengths from semi close-up to very close-up which are easily changed over by simple clip-in slots on the headband. Detachable triple LED spotlight with magnetic base for separate use and plastic infill for headband when LED used separately. Requires 3 x AAA 1.5v batteries (not included).

Price Each

Order Code	Product Code	1+	6+
WX61153	2003637	£50.57	£48.04

### Illuminated head band magnifier



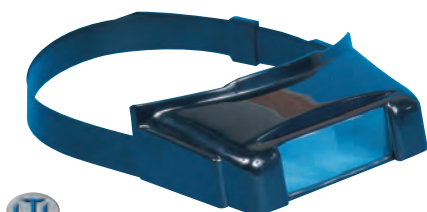
## Roebuck NEW

This head band magnifier has the following features as standard. Multi-coated acrylic lenses offer a choice of 4 magnification powers via a combination of fixed, flip-up and monacle lenses: 1.5, 3.0, 9.0 and 10.5. It also has bright dual LED illumination, tilt and swivel LED adjustment, a visor that can be lifted and lowered as required, and the magnifier can be used when wearing glasses. The headband magnifier is most useful for assembly and inspection work and is also suitable for hobbies, crafts and general reading.

Price Each

Order Code	Product Code	1+	6+
WX61154	2017427	£11.97	£11.37

### 3D Sighter



- Enlarges close work so that it is seen clearly in 3D
- Adjusts to head size comfortably
- Has no moving parts to wear out or replace
- Magnification, 3D sighter

Price Each

Order Code	Product Code	Description	1+	6+
WX35117	52-660-707	1-3/4 X Mag	£21.76	£20.61
WX35118	52-660-727	2-1/4 X Mag	£21.76	£20.61
WX35119	52-660-737	2-3/4 X Mag	£27.17	£25.74

## Microscopes

### USB Digital Microscope



- High speed connection with USB 2.0
- Light intensity adjustment
- Focus wheel for zoom range from 10X to 200X magnification
- Light source from 6 white LED bulbs
- Adjustable stand
- Auto focus
- Record still image or video
- USB Digital Microscope is a fully functional magnification device which is extremely easy to use. By just plugging directly into your computer you can view objects magnified up to 200 times. An adjustable light control wheel, 6 white LED lights, a 2 megapixel digital camera and USB 2.0 interface ensure the Microscope captures high quality images and videos to your PC or laptop
- Impact-resistant ABS case with 1.2m USB cable
- Light-weight and easy to handle
- Easy to operate one-handed with a rotary focus wheel, light intensity wheel and button for still images
- Sharp, clear image with adjustable light intensity from 6 white LED's
- Magnified images can be viewed in real time on the computer screen
- Still images can be captured at the touch of a button, displayed on the computer screen and saved
- Video images can be viewed live on the screen as they are being captured, saved on the computer for viewing and use later
- Microscope can be used hand-held or with the stand supplied
- Chrome stand is easily adjustable with 2 pivot points and 360° rotation of the arm and holding socket
- Stand can be locked into place with the required positioning
- Requires no batteries, receiving its power directly from the computer's USB power
- Image processing software runs on Windows 98, ME, 2000, XP & Vista
- Image Sensor 2 Megapixels
- PC Interface Mini USB 2.0 with 1.2m cable
- Power supply 5V DC from USB port
- Size 110mm x 33mm Ø

Price Each

Order Code	Product Code	Description	1+	3+
WX45612 ‡	DMS-USB2	USB Microscope	£85.00	£81.60

‡ Special delivery applies. Please ask for details

### Long Reach Microscope



- For viewing surfaces of items which will not fit onto conventional plate
- 2x Objective lens (giving x20 magnification)
- 10x Eyepiece with adjustable centres & rubber eye cups
- Top swivelling light source, 12v lamp, 220v supply
- Positive rack and pinion focussing
- Articulated 290mm long extension arm
- Heavy duty base plate 120 x 200 x 65mm
- 290mm Column height

Price Each

Order Code	Product Code	Description	1+	3+
WX38653 ‡	59-020-100	Microscope	£301.15	£285.30
WX38655 ‡	59-020-105	Lens x1	£37.05	£35.10
WX38654 ‡	59-020-102	Spare Bulb	£9.69	£9.18
WX38650 ‡	59-020-041	Eye Piece 15x	£21.47	£20.34
WX38651 ‡	59-020-042	Eye Piece 20x	£21.47	£20.34
WX38652 ‡	59-020-045	Eye Piece 10x	£42.75	£40.50

‡ Special delivery applies. Please call for details



**For eye protection, see our Personal Protection Equipment section**



## Stereo Microscope



- Highly quality stereo microscope
- Used exclusively for surface inspection
- 2x and 4x objectives
- 10x Eyepiece
- 12v Incident illuminator with 220v on/off switch
- Eyepieces mounted in 45° inclined eyetube
- Interpupillary distance adjustable from 2" to 3" (50mm to 75mm)
- Objectives mounted in 180° revolving turret with positive click stop, parfocal and parcentred
- 2.5" Reversible white/black stage plate provided
- Pair of rubber eye cups provided

### Price Each

Order Code	Product Code	Description	1+	3+
WX40011 ‡	59-020-040	Microscope	£323.00	£306.00
WX38648 ‡	59-020-039	Spare Bulb	£2.95	£2.79
WX38650 ‡	59-020-041	Eye Piece 15x	£21.47	£20.34
WX38651 ‡	59-020-042	Eye Piece 20x	£21.47	£20.34
WX38652 ‡	59-020-045	Eye Piece 10x	£42.75	£40.50

‡ Special delivery applies. Please call for details

## Hardness Testers

### Durometer Shore "A" Scale



- Shore Durometers are suitable for checking the hardness of rubber, plastic and many other soft materials
- Fast easy to read, portable instrument
- Manufactured to DIN 53 505
- Complete with reference setting block and instructions
- Supplied in fitted case

### Price Each

Order Code	Product Code	1+	3+
WX31794	59-500-000	£133.00	£126.00

## Digital Shore scale "A" and "D" Durometer



- Testing rubber, plastic, leather and all other soft materials
- Fast and easy to read
- Large digital display, digits 6mm high
- Use by hand or mounted on a stand
- Supplied with a reference block
- Data output for SPC
- Zero setting - preset - value input options
- Electronic module protection to IP65, even with data output (see IP Ratings explanation within digital calipers section)
- Can be used in conjunction with Shore bench stand
- UKAS Certification
- Conforms to DIN 53 505, ASTM D2240 and ISO R868
- Display range 0-100

### Price Each

Order Code	Product Code	Description	1+	3+
WX38590 ‡	DSAS001	Durometer A	£481.50	POA
WX44020 ‡	DSDS001	Durometer D	£481.50	POA

‡ Special delivery applies. Please call for details

## Roughness Testers

### Portable Surface Roughness Tester



- A portable pocket sized surface roughness measuring instrument ideally suited to rapid on the spot surface roughness measurements (Ra and Rz roughness parameters)
- Back lit LCD
- Dynamic Test display: progress of cut-off length during testing
- Protection slide on pick-up
- Auto off after 90 seconds
- Both Ra and Rz parameters in one instrument
- Piezo electric pick-up stylus for external surfaces

### Price Each

Order Code	Product Code	1+	3+
WX44021 ‡	MTR-110	Tester	£902.00

POA

Range: Rz 0.10 - 50um / Ra 0.05 - 15.0um

‡ Special delivery applies. Please call for details

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Ultrasonic Thickness Gauging  
with the TT-100 from Bowers



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XT Bore Gauging Range



Moore & Wright  
Precision Hand Tools



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baty



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